

# STEAM Consortium:

Integrating the Arts into STEM and  
Common Core Curricula

RUTGERS

Graduate School of Education



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## Acknowledgments

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Mr. David  Mooij, Superintendent, Neptune Township School District  
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We also wish to thank Rutgers Graduate School of Education Dean Wanda J. Blanchett and former Dean Richard De Lisi for their support.

# STEAM Consortium Team

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**Dr. Sandra M. Tomlinson-Clarke**

Associate Professor, Rutgers Graduate School of Education (GSE)

**Dr. Penelope E. Lattimer**

Director, Rutgers Institute for Improving Student Achievement (RIISA)

**Willa Spicer, Assessment**

Former Deputy Commissioner, NJ DOE

**Dr. Jennifer Gardella, Evaluation**

Statistician, Adjunct Professor, Rutgers Graduate School of Education (GSE)

**Dr. Rima Faber, Professional Teaching Artist (Dance)**

Faculty, Dance Education, Rutgers Mason Gross School of the Arts  
The National Coalition for Core Arts Standards

**Alfredo Franco Professional Teaching Artist (Visual)**

Director of Education, The Delaware Museum  
Formerly Curator of Education at the Zimmerli Art Museum, Rutgers University

**Jim Jack, Professional Teaching Artist (Theatre)**

Director of Education and Outreach, George Street Playhouse (GSP)



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The Geraldine R. Dodge Foundation  
4 Maple Avenue, Suite 400, Morristown, NJ 07960  
[www.grdodge.org](http://www.grdodge.org)

## Project Directors

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Dr. Saundra M. Tomlinson-Clarke, Principal Investigator, is an Associate Professor in the Department of Educational Psychology at Rutgers Graduate School of Education, and a licensed psychologist. Her research agenda over the years has been in response to current social issues that include the increasingly culturally and linguistically diverse and changing demographic profile of the U.S. population, the underrepresentation of racial-ethnic minority students in the educational pipeline, and the expanding influence of globalization on the lives of individuals worldwide. Professor Tomlinson-Clarke maintains an emphasis on learning and development within a socio-cultural context, examining factors that contribute to the personal development and academic achievement of diverse learners in middle school through post-secondary education.

Dr. Penelope E. Lattimer, Co-Principal Investigator, is Director of Rutgers Institute for Improving Student Achievement (RIISA) and the New Jersey School Development Council at Rutgers, The State University of New Jersey. From 2003-2007 Dr. Lattimer held a number of positions at the NJ State Department of Education which included: Special Assistant to Commissioner William Librera and Assistant Commissioner for the Central Region; Chief of Staff and Assistant Commissioner for the Division of District and School Improvement working with Commissioner Lucille Davy. Prior to joining the senior staff at NJDOE, Penelope Lattimer was employed by the New Brunswick City Board of Education as a high school principal, director of secondary education and assistant superintendent for curriculum and instruction.

# Arts Integration Teacher Professional Development

## Participating Schools and Teacher Teams

County	Districts/Schools	Participating Teachers/Principals
<b>Middlesex</b>	<b>Jamesburg Public Schools</b>	
	Grace M. Breckwedel Middle School	Ms. Ellen Blashkovsky (Math) Ms. Jennifer Morgart (Art) Ms. Susan Strumwasser (Math/Science) Principal: Dr. Gail Verona (retired June 2014) Principal: Mr. Chad Donahue
	<b>Perth Amboy Public Schools</b>	
	William C. McGinnis Middle School	Mr. Marc Taras (Science) Mrs. Lindsey Tisch (Data/Technology) Mrs. Rachel Wintemberg (Art) Principal: Dr. Myrna Garcia
<b>Monmouth</b>	<b>Neptune Township Public Schools</b>	
	Gables Elementary School	Mr. Nicholas Bowden (Art) Ms. Karen Poll (5th grade) Principal: Mrs. Sally A. Millaway
	Neptune Middle School	Ms. Ebony Lattimer (Science) Mr. Daniel Mullarkey (Math) Mr. Glen Swindell (Art) Principal: Dr. Mark Alfone
<b>Union</b>	<b>Plainfield Public Schools</b>	
	Dewitt D. Barlow Elementary School	Ms. Kathy Maldonado (Music) Ms. Linda Reid (Elementary) Principal: Ms. Janet R. Grooms
	Hubbard Middle School	Ms. Victoria Leigh (Art) Ms. Olufunke Onigbogi (Math) Mr. Mark Toman (Science) Principal: Mr. Kwama W. Asante
	Maxson Middle School	Ms. Candice Curry (Math) Ms. Rebecca Allain (Science) Principal: Dr. Reginald Davenport

The President's Commission on Arts and the Humanities (2011) concluded that arts education is "an effective tool in school-wide reform" that assists in resolving current educational challenges (p. 29). Professor Saundra M. Tomlinson-Clarke and Dr. Penelope E. Lattimer, Principal Investigators, developed a year-long teacher professional development funded by the Geraldine R. Dodge Foundation. Professional development was designed to assist teachers with the integration of Arts and STEM (Science, Technology, Engineering, Mathematics) pedagogical practices for improving teacher effectiveness and student engagement. Rutgers Graduate School of Education (GSE), the Rutgers Institute for Improving Student Achievement (RIISA) and professional teaching artists representing three art forms (dance, theatre, and visual) worked in partnership with elementary and middle school teachers from four New Jersey School Districts. Three arts organizations in Central New Jersey (Zimmerli Art Museum, Cross Roads Theatre Company, and George Street Playhouse) provided art spaces for teacher professional development. Professional development was designed to assist participating teachers to experience, develop and deliver STEAM (Science, Technology, Engineering, Art and Mathematics) lessons to their students. The overall goals of professional development were to (1) increase teacher effectiveness by facilitating creative and innovative learning opportunities for elementary and middle school students, and (2) create a STEAM Consortium through which teachers disseminated their arts-integrated lessons and shared reflections of their learning experiences with colleagues.

*Rutgers Graduate School of Education, the Rutgers Institute for Improving Student Achievement and professional teaching artists representing three art forms worked in partnership with elementary and middle school teachers from four New Jersey school districts.*



## Twenty-first Century Skills and Arts Integrated Learning

High stakes testing and test-driven external accountability have dramatically influenced teaching and assessment. An increasing number of students in the United States are identified as “at risk” and the achievement gaps between highest and lowest performing students are widening (Education Trust, 2009). Strategies for decreasing achievement disparities between student groupings (i.e., low-income, bilingual, students with special needs, race/ ethnicity) on measures of academic success (i.e. grade-point average, standardized test scores, drop-out rates, enrollment in rigorous courses, graduation rates, college admission rates) are among the on-going challenges that educational researchers and practitioners must address in preparing students with 21st century skills for success in school and work. In an attempt to move beyond minimum competency toward proficiency and close the achievement gap, high stakes testing initiatives and policies (i.e., NCLB) hold teachers accountable (Lee, 2008). As a result, No Child Left Behind has directly affected teachers’ expectations, their perceptions of their teaching effectiveness, and their students’ overall school experiences.

*No Child Left Behind has directly affected teachers’ expectations, their perceptions of their teaching effectiveness, and their students’ overall school experiences.*





High quality instruction that facilitates critical thinking, and fosters knowledge-transfer skills must precede measureable achievement (Boykin & Noguera, 2011). Twenty-first century skills assist students in achieving higher-order learning outcomes, and include learning skills such as creativity and innovation, critical thinking and problem solving, and communication and collaboration (Partnership for 21st Century Skills, 2011). Engaging students in creative, collaborative and innovative learning is associated with improved test scores and overall school achievement (Presidents' Committee on the Arts and the Humanities, 2011). Furthermore, twenty-first century skills extend learning beyond academic achievement in the classroom to include learning skills needed for success at work and in life.

Often conceptualized as inquiry and project-based learning, STEM (science, technology, engineering, and mathematics) is considered by many educators as a way to prepare students to meet the demands of a global economy (Breiner, Harkness, Johnson, & Koehler, 2012). Although considered necessary, White (2010) does not view STEM as sufficient for creating innovative learning, and advocated for arts-based learning to facilitate students' critical thinking skills.

Arts integration is a teaching methodology that aligns with the Common Core and increases student achievement and motivation, fosters creativity, critical thinking, communication and collaboration, and assists students in developing knowledge-transfer skills for academic success (Connelly, 2012; Rinne, Gregory, Yarmolinskyaya, & Hardiman, 2011). In addition to enriching the curriculum, arts integration is associated with increased test scores among the lowest performing students (President's Committee on Arts and Humanities, 2011). In support of arts integrated learning, Hardiman, Magsamen, McKhann and Eilber (2009) highlighted cognitive-neuroscience research suggesting that the arts provide a different context for learning that result in sustained learning. Students in arts integrated classrooms reported deeper understanding of the subjects, constructive challenges that increased engagement and motivation, broader learning experiences, and a desire to seek learning opportunities outside of the traditional classroom (DeMoss & Morris, 2002). Integrating Arts and STEM pedagogical practices provides teachers with rich, innovative strategies that foster student retention through learning experiences that are perceived by students as meaningful and relevant (Marshall, 2014, White, 2010; Wynn & Harris, 2012).

## Arts Integrated Student Learning

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*“an approach to teaching in which students construct and demonstrate understanding through an art form. Students engage in a creative process, which connects an art form and another subject area and meets evolving objectives in both”*

The primary focus of our work is to provide professional learning experiences for teachers that extend knowledge of the arts, and assist with integrating the arts with STEM curriculum. We embraced Silverstein and Layne’s (2010) definition of arts integration as, “an approach to teaching in which students construct and demonstrate understanding through an art form. Students engage in a creative process, which connects an art form and another subject area and meets evolving objectives in both” (p 1). Unlike some approaches to arts integration that use the arts to teach subject content, we conceptualized arts integration as a model from which “multi-modal arts-based learning is used to enhance comprehension of academic subjects (Marshall, 2014, p. 105). Teachers participating in professional development were encouraged to integrate multi-model arts- based learning with mathematics and science, encouraging students to learn through experience, reflection and discovery of connections. Consistent with this approach, arts integration is perceived as larger than the activity and places emphasis on the “how” students learn rather than “what” students learn (Silverstein & Layne, 2010).

## The Teachers and Professional Teaching Artists

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Science, math, and technology teachers from four New Jersey school districts in partnership with New Jersey teaching artists engaged in professional development designed to increase teacher effectiveness, facilitate creativity and innovation, and fulfill requirements of the New Jersey Curriculum Standards for Visual and Performing Arts. Professional teaching artists demonstrated ways in which dance, theatre and visual arts extend to other subject areas, fostering creativity and enhancing learning. Working in school teams, teachers developed STEAM lesson modules, taught the lessons they developed to their students, and

revised their lessons based on feedback. Teachers identified learning conditions that support the delivery of STEAM pedagogical practices. Spotlight on practice presents the STEAM lesson modules developed by teachers who participated in Arts Integrated Professional Development. In addition to equipping students with 21st century skills needed for success in a complex, global economy, a Consortium engaged teachers in on-going dialogue of STEAM connections.

**The goals of Arts Integrated Teacher Professional Development included:**

1. Increasing engagement in the learning process by exploring the relationship between brain sciences, the Arts, and STEM,
2. Encouraging teacher teams to partner in exploring areas where the Arts, and STEM intersect,
3. Integrating arts, math, science, and technology learning modalities in teaching elementary and middle school students,
4. Extending knowledge and student comprehension of academic subjects (i.e. Science, Technology, Arts, Math) for elementary and middle school students,
5. Integrating STEAM curriculum with Common Core State Standards and New Jersey State Curriculum Standards from both content and skill-based perspectives,
6. Improving student achievement by increasing student preparedness in the 21st century skills needed for success in a global economy.

**Working collaboratively in school /teacher teams, professional teaching artists assisted teachers in:**

1. Experiencing Arts Integrated learning experiences,
2. Identifying conditions for improving student achievement through the arts,
3. Developing and revising arts integrated lessons, and
4. Exploring ways to enrich the curriculum through multi-modal arts.



# Spotlight on Practice

A central concept of arts integrated learning experiences is the focus on the “how” of teaching, which incorporated student-centered instruction that facilitated experiential, evolving, collaborative, problem-solving and reflection (Silverstein & Layne, 2010). Teacher Professional Development engaged participating teachers in multi-model arts integrated experiences to extend art knowledge and to enhance understanding of math / science. A lesson on dramatic expression actively engaged teachers in an experience that increased understanding of the arts and the conditions essential to arts integrated learning: Risk-taking, Trust and Collaboration.

## STEAM Teacher Professional Development

### Dramatic Expression: Theatre

**Developed and Led by Mr. Jim Jack, Director of Education and Outreach, George Street Playhouse**

**Thematic Question (Lesson Aim):** How do theatre artists use risk-taking, trust and collaboration to help create an ensemble?

**ENSEMBLE:** A company of actors that work together to create theatre.

**TABLEAU:** A dramatic scene that is expressed silently without movement; a frozen image that tells a story.

**Know** (facts, information, vocabulary):

1. Introduce and explore a variety of trust exercises to build ensemble.
2. Explore and practice development of character, theme and genre through applications of tableau.

**Understand** (comprehension of the big ideas):

1. How risk-taking, trust and collaboration are essential when building a group of individuals to work together as an ensemble.

**Do** (active demonstration of learning):

1. Make physical choices that will show an understanding of character, theme, spatial relationships, imagination, tempo, energy, and balance.
2. Collaborate with other artists to craft a piece of theatre based on a theme.

**Inciting Incident:** Integration Warm-up (10 minutes)

- a. Focus Circle:
- b. Zoom—Zoom w/names
- c. Walks in space
- d. Trust Exercises: Blind Finger

**Sculpture Wheel: Comedy/Tragedy**

### **Sculpture Wheel**

Group is split in two. Half forms a circle in the center of the room facing out. The other half forms a circle around them, in front of a partner, facing in. The Interior circle stands in neutral as clay. The Exterior circle is a collection of sculptors. The sculptors approach their clay and “sculpt” it. They should physically move the clay into the shape they want. They can also “show” the pose they want by demonstrating it with their body, or by giving the clay verbal cues. When they have completed the sculpture, the clay is to remain frozen, and the sculptors rotate around the circle viewing the other sculptures until they return in front of their own. The Interior sculptures are then released, and the sculptors now become the clay. Repeat. When the sculptures are released you can have them “come to life” and say a word, or a few lines expressing the thoughts or circumstances of their character. Sculptors can be given specific instructions about what type of character to create, for instance, a character in a comedy, tragedy, or one from the Civil War, etc.

When both partners have had a chance to be clay and a sculptor, the Exterior circle can rotate one place to the left so everyone gets a chance to work with a new partner. Obviously, performers should be encouraged not to sculpt partners into embarrassing poses.

**Introduction of Form:** Tableau (15 minutes)

- a) Three Images in Balance: Structures of support. Expression through comedy or tragedy
1. **TASK:** Select the genre of comedy or tragedy. Your group will now create a series of three images of balance with transitions in between that in some way incorporate this genre through character and circumstance. These images can tell a story of the genre, or abstract the genre. What is important is that they explore as fully as possible the potential of the genre in each image. Do not settle for the easy choice. The three images should together reflect a journey of movement and relationship to the genre. Take time to explore the potential of entrances, exits and the transitions between the images, and how they might convey meaning. Here they are:
    - Two actors support one
    - One actor supports two
    - Three actors support each other

**Adding complexity:** Once each group has the basic structure for their images, they will select two of the challenge cards to incorporate into their images.

1. Challenge: Incorporate tempo (Quick/Slow) into your entrance and exit.
2. Challenge: Incorporate a staggered or unified entrance and exit.
3. Challenge: Use different levels to create the images
4. Challenge: Engage genre to create or transition through the images

**Reflection:** Each group will perform their piece. The audience will offer their ideas of the genre of the piece based on what they saw.

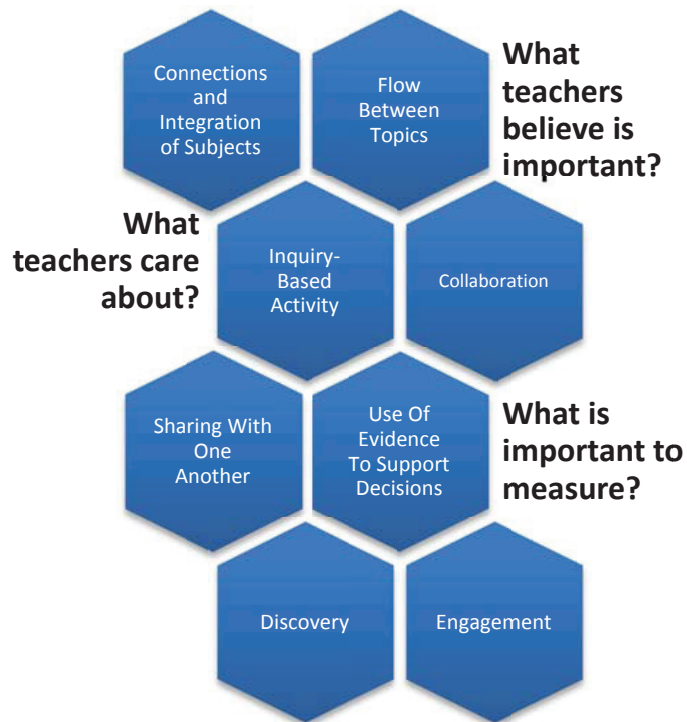
1. Reflection: How did you work together as a group? What were your strengths? Challenges?
2. When challenges occurred, how were they resolved?
3. How did you arrive at consensus? Did everyone feel his or her voice/input was validated?



# Teachers' Reflections Following Dramatic Expression

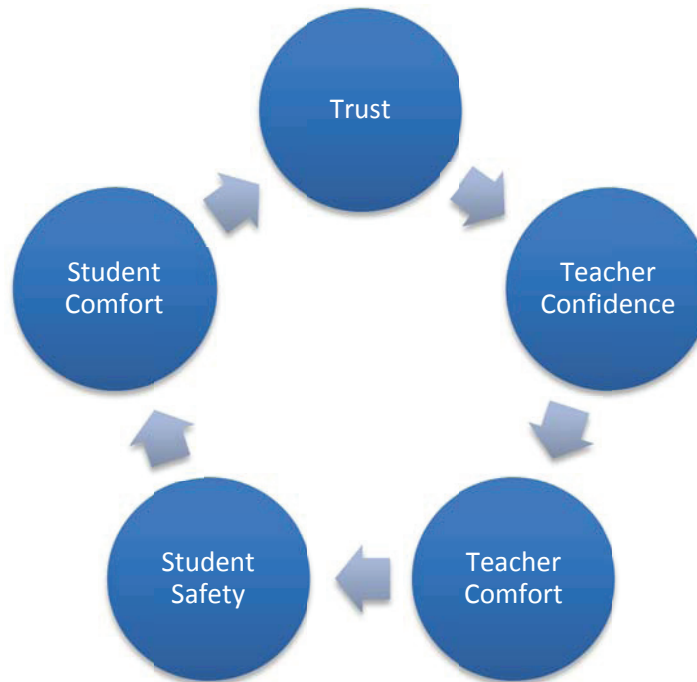
What is important to teachers in their work with their students?

- Connectedness - Understanding- Sharing
- Not the activity itself- the experience as an approach to learning
- Learning through discovery
- Assessment- Only makes sense when you measure what you believe is important
- All children can learn
- Teachers' responsibility to teach *what we care about*



## Teaching and Assessment: Focusing on the “How” of Teaching What is important? What we care about for our students:

- Connections- (integration with disciplines)- specific topics
- Flow between topics- moving forward
- Inquiry based activity (the doing)
- Collaboration
- Sharing with one another (groups/ presentations)
- Using evidence to support decisions/ position
- Time for reflection and understanding
- Use of art to represent real world concepts
- Discovering/discovery
- Internal assessment
- Fun
- Engagement
- Perception that students are safe





# STEAM Lesson Modules

Lesson materials are available for download at [gse.rutgers.edu/steamlessons](http://gse.rutgers.edu/steamlessons).

In demonstrating an understanding of arts integration as a method of teaching that uses multi-model art-based learning, teachers worked collaboratively in school teams and developed arts integrated lesson modules. Each lesson connected art with math, science, or technology to enhance learning. The resulting work products engaged students in reflection of what they learned and demonstrated the ways in which meaning was made from the integration of the art form and the subject (i.e., math, science, technology).

## Arts Integrated Lessons

**Jamesburg Public Schools**

**Middlesex County**

**Grace M. Breckwedel Middle School**

### Teacher Team:

Ms. Ellen Blashkovsky (Mathematics)  
Ms. Jennifer Morgart (Art)  
Ms. Susan Strumwasser (Mathematics)  
Principal: Dr. Gail Verona (retired June 2014)  
Principal: Mr. Chad Donahue

The Jamesburg team developed several lessons integrating the arts and mathematics. Ms. Morgart and Ms. Susan Strumwasser developed a 6th grade lesson module in which students learned about the pyramids, hieroglyphics and explored proportions. Ms. Ellen Blashkovsky and Ms. Morgart integrated arts and mathematics, demonstrating the Golden Ratio in art and mathematics. Also, Ms. Blashkovsky developed a lesson on tessellations in which students created repeating patterns from a 3 x 3 square and also discovered the artwork of M. C. Escher.



**Perth Amboy Public Schools  
Middlesex County  
William C. McGinnis Middle School**

**Teacher Team:**

Mr. Marc Taras (Science)  
Mrs. Lindsey Tisch (Data/ Technology)  
Mrs. Rachel Wintemberg (Art)  
Principal: Dr. Myrna Garcia

Mrs. Wintemberg, Mrs. Tisch, and Mr. Taras integrated art, science, technology and math in a Unit Lesson on the solar system/plants. Connected themes were taught in art and science classes, and students used digital media to demonstrate understanding in each subject. Mathematics was integrated into the lessons to kinesthetically demonstrate the distance between planets and the sun. Students created two- and three- dimensional works of art, making a cohesive visual statement by employing elements of art and design. Each student group received an iPad to assist with the learning objectives.



**Neptune Township Public Schools  
Monmouth County  
Gables Elementary School**

**Teacher Team:**

Mr. Nicholas Bowden (Art)

Ms. Karen Poll (Elementary)

Principal: Mrs. Sally A. Millaway

Mr. Nicholas Bowden and Ms. Karen Poll created a lesson integrating the arts with grades 4 and 5 mathematics and science. The learning objectives of the lesson included (1) increasing understanding of the essential functions of the human eye and (2) creating two- and three-dimensional works of art from color, line, shape, form texture, and space. Engaging in class activities, students experienced how to 1) create and use pointillism to explore optics in creating colors from many small dots of pure color, 2) describe the interaction of parts of a system (whole), and 3) explain how the eye takes in and sends information to the brain for processing.



**Neptune Township Public Schools  
Monmouth County  
Neptune Middle School**

**Teacher Team:**

Ms. Ebony Lattimer (Science)  
Mr. Daniel Mullarkey (Mathematics)  
Mr. Glen Swindell (Art)  
Principal: Dr. Mark Alfone

The Neptune Middle School Team developed several connected lessons, integrating the arts, science and mathematics. Ms. Lattimer introduced proportion, pointillism and the work of George Seurat in the science unit on multicellular organisms. Mr. Mullarkey's lesson complemented previous lessons on proportion and fractions, demonstrating the connection between fractions, proportion and art. Arts learning was extended through the creation of museum boards, which provided a context for the Lascaux murals. This art lesson on murals and cave painting connected and deepened the experience with the arts, and introduced students to the arts, culture and human anthropology.



**Plainfield Public School District  
Union County  
Barlow Elementary School (K-5)**

**Teacher Team:**

Ms. Kathy Maldonado (Music)

Ms. Linda Reid (Elementary)

Principal: Ms. Janet Grooms

Ms. Madonado and Ms. Reid infused mathematics, literacy and three art forms (i.e., music, visual and dance) in their lesson. Students learned about each subject area and read "The Skirt" by Gary Soto as they created skirts for their performance at the Hispanic Heritage Month assembly at their school. Taught within a cultural context, this lesson created a relevant and meaningful experience for students.



**Plainfield Public School District  
Union County  
Maxson Middle School**

**Teacher Team:**

Mrs. Rebecca Allain( Science)

Ms. Candace Curry (Mathematics)

Principal: Dr. Reginald Davenport

Students experienced connections between self-perceptions, stereotypes and career development and choice by engaging in the lesson developed by Mrs. Allain. Working in groups, students explored art and science vocabulary and used evidence based learning and reflection to complete science class assignments. Mrs. Allain also developed an arts integrated lesson using movement to demonstrate three types of rock formations. Ms. Curry developed two student-centered lessons connecting the arts and mathematics. Students engaged in reflective activities that demonstrated symmetry, fractions, parts of the whole, and percentages. Students also examined their relationship to one another and to the whole class, reinforcing cooperation and collaboration.



**Plainfield Public School District  
Union County  
Hubbard Middle School**

**Teacher Team:**

Ms. Victoria Leigh (Art)

Mr. Mark Toman (Science)

Principal: Mr. Kwame W. Asante

Integrating art and science, Ms. Leigh and Mr. Toman created lessons that demonstrated the concept of energy to 7th grade students. Both teachers focused on the theme of energy and encouraged students to think about the concept of movement from multiple perspectives. In teaching about energy in science, Mr. Toman introduced the continental drift and the theory of convection. The same students were exploring energy and movement in their art class taught by Ms. Leigh. Students examined the movement of modern dances, then were asked how they would show movement? Using a wood block, a wire hanger, and hosiery, students engaged in kinesthetic learning and created sculptures. The sculptures created by the students also were used in their science class to represent concepts related to energy and movement.



# Professional Teaching Artists

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## **Rima Faber, Ph.D.**

*The National Coalition for Core Arts Standards*

Dr. Rima Faber is based in the Washington DC area and is the current chair for the dance writing team for the NCCAS new national standards in dance. At Rutgers she developed and instructs the on-line GSE course in Assessment and Measurement for Dance. Dr. Faber received her Ph.D. and M.A. from American University and her B.A. from Bennington College.

Dr. Faber founded and directed The Primary Movers (1979-2000), a studio and children's performing company that taught dance to children from physiological, psychological, neurological, cognitive approaches to learning dance as an art form. Dr. Faber worked as a Washington Artist in Education teacher from 1980-1991 and received Artist in Education grants from the DC Commission on the Arts (1988-1991) to teach academic curricula through dance in elementary schools.

Dr. Faber worked with Educational Testing Service (ETS) and the National Assessment of Educational Progress (NAEP) (1994-1997). She was Chair of the Editorial Board of the Congress on Research in Dance (CORD, 1997-1999); Adjunct Professor at Montgomery College Dept. of Fine Arts; Adjunct Faculty at American University Dept. of Performing Arts; and Visiting Clinical Professor at New York University. In 1998, Dr. Faber was instrumental in forming the National Dance Education Organization and served as founding President, founding Executive Director and, currently, Program Director.

## **Alfredo Franco**

*The Delaware Museum*

Alfredo Franco is the Director of Education at the Delaware Museum. He was the Curator of Education at The Zimmerli Art Museum of Rutgers University from 2002-2013. He is also an Adjunct Assistant Professor of German Studies in the Germanic Languages and Literature Department of Duke University, and an instructor of Creative Writing in the Department of English.



A native of Washington, D.C., Mr. Franco was educated at The Johns Hopkins University, where he completed his undergraduate degree in German Literature and Art History as well as a graduate degree in Art History. In his graduate work, he concentrated on Northern European Art of the Seventeenth Century as well as on the Russian Avant-Garde. Franco also received a Master of Fine Arts degree in Creative Writing from New York University.

Franco spent several years in Richmond, Virginia as Adult Programs Manager at The Virginia Museum of Fine Arts. Prior to that, he taught art history and American literature in Mexico City, where he directed the English Department at the Technological Institute of Monterrey. For several years, he taught the history of German Art in the Rutgers-Duke Berlin Program.

### **Jim Jack**

*George Street Playhouse*

Jim Jack is the Director of Education and Outreach for the George Street Playhouse (GSP). As Director, Jim supervises GSP's Academy, School-based Residency Programs, and acclaimed Educational Touring Theatre. For GSP's Educational Touring Theatre, which annually reaches 40,000 students across New Jersey, Jim recently commissioned and produced *Austin the Unstoppable*, a new musical comedy that explores how a New Jersey family faces the challenges of childhood obesity and type II diabetes.

Prior to GSP, Jim co-founded Bronx Theatre High School, a New Century High School in partnership with Roundabout Theatre Company. Jim served in many capacities for Roundabout Theatre Company, most notably as Acting Director of Education. He has worked as a teaching artist with the 92 Street Y, ArtsConnection, Metropolitan Opera Guild, SUNY Albany, Westfield State College and Northern Stage. Jim currently teaches Shakespeare for the MFA Acting Program at Brooklyn College.

He received his MFA from the Academy for Classical Acting at George Washington University. As an actor, Jim has performed with the Shakespeare Theatre, Pennsylvania Shakespeare Festival, San Jose Repertory Theatre, Northern Stage, and Everyman Theatre to name a few. He is a proud member of AEA and SAG.

# Assessment and Evaluation

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## **Willa Spicer**

*Former Deputy Commissioner, New Jersey DOE*

Willa Spicer is the former Deputy Commissioner of Education of New Jersey. She led New Jersey Performance Assessment Alliance as Project Director, and prior to that served as Assistant Superintendent for Curriculum and Instruction at South Brunswick Township Public Schools. She served as both a high school principal and an elementary principal in the same District. Ms. Spicer is a graduate of Wellesley College and the Harvard Graduate School of Education. She pursued additional graduate studies at Rutgers University.

Ms. Spicer served on the Board of Education in Lawrence Township and taught in Trenton High School and Trenton Alternative School. She worked as a coadjutant at Rutgers University, teaching curriculum courses at both the graduate and undergraduate level. She has coauthored several publications dealing with assessment and has served the USDOE as a site visitor and a member of the review panel for the Blue Ribbon Schools program. In New Jersey, she served on a variety of professional committees and is a board member of Young Audiences. She was recognized as an outstanding educator by the Rutgers Graduate School of Education and Rider College Education Department. She received the Ernest Boyer Distinguished Educator Award from the Association for Supervision and Curriculum Development and the community award for distinguished women from Princeton YWCA.

## **Jennifer Gardella, Ph.D.**

*Evaluator*

Jennifer Gardella, Ph.D. is a self-employed statistician, social media consultant, and adjunct professor raising her three daughters in central New Jersey. Dr. Gardella completed her undergraduate work at Fordham University and holds both a masters and doctoral degree in Educational Psychology from Rutgers University where she started her professional career as a fundraising professional. Dr. Gardella started three scout troops, ran PTO fundraisers and events, and spent 6 years on the Board of the Lawrence Township Education Foundation (ltefnj.org) including a term as President.

## About the Geraldine R. Dodge Foundation

### **Mission**

The Geraldine R. Dodge Foundation supports leadership, innovation, and collaboration for a better New Jersey.

For nearly 40 years, the Geraldine R. Dodge Foundation has nurtured leaders, ideas, and institutions which transcend self interest and promote a sustainable future. We focus on issues critical to our home state of New Jersey, and organizations that have a direct and meaningful impact here.

We believe that philanthropy includes not only providing resources, but also connecting leaders across sectors, sharing expertise, and promoting collaboration to help build movements for change around important issues.

We fund Arts, Education, Environment and Media initiatives that are innovative and promote collaboration and community-driven decision making.

We listen to the needs of the nonprofit sector by offering sustained and comprehensive technical assistance, and we pay careful attention to the public policy environment in which our grantees operate.

We work with nonprofit, community, government, and business leaders to imagine a better New Jersey.

## About Rutgers Graduate School of Education

The Rutgers University Graduate School of Education (GSE) is dedicated to the study and improvement of education. The creation of knowledge about teaching and learning is central to our mission. We seek to ensure that all children and adults have access to high quality educational programs. As such, our work addresses the cognitive, social, organizational, cultural, linguistic, developmental, and policy dimensions of education.

Our faculty makes unique and significant contributions to educational scholarship by conducting research and improving practice in relation to three pressing issues in education: (i) meeting the needs of diverse learners, (ii) using emerging digital pedagogical tools

effectively, and (iii) addressing the equity and adequacy of financial, human, and social resources for PK-12 and higher education.

Our instructional programs are designed to produce graduates who become effective educational practitioners, transformative educational leaders, and accomplished educational researchers. Our partnerships and service contributions focus on New Jersey but extend to both national and global communities.

In summary, our mission is to create new knowledge about educational processes and to lead in the development of research-based instructional, professional, and outreach programs. The GSE has been consistently ranked as one of “America’s Best” graduate schools of education in the annual US News & World Report survey. At present the School is ranked #39 in the US News & World Report survey.

Please explore our website [gse.rutgers.edu](http://gse.rutgers.edu) to learn more about the Graduate School of Education.

## About Rutgers, the State University of New Jersey

Chartered in 1766, Rutgers, the State University of New Jersey, is the eighth-oldest institution of higher learning in the United States. It has a unique history: from its inception as a colonial liberal arts college, Rutgers grew to become the land-grant college of New Jersey in 1864, and to assume full university status in 1924. Legislative acts of 1945 and 1956 designated it the State University of New Jersey.

Today, Rutgers is one of the leading public research universities in the nation. With nearly 58,000 students and over 9,000 faculty and staff on its three campuses in Camden, Newark, and New Brunswick, Rutgers is a vibrant academic community committed to the highest standards of teaching, research, and service.

With 27 schools and colleges, Rutgers offers over 100 undergraduate majors and more than 100 graduate and professional degree programs. The university graduates more than 10,000 students each year, and has more than 350,000 living alumni residing in all 50 states and on six continents. Rutgers also sponsors community initiatives in all 21 New Jersey counties. University wide, new degree programs, research endeavors, and community outreach are in development to meet the demands of the 21st century.

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