The Greater Philadelphia Cultural Alliance would like to thank its project partners and advisory committee members, including: Victoria Ankrah, Acelero; Eleanor Brown, Ph.D., West Chester University; Diane Castelbuono, School District of Philadelphia; Kathy Hirsh-Pacek, Temple University; Ann O’Brien, Montgomery Early Learning Centers; Karen Pollack, Maternity Care Coalition; Lola Rooney, Philadelphia YMCA; Betsy Vassallo, Southeast Regional Key; and Barbara Wasik, Temple University, all of whom supplied valuable resources, input and guidance. The Cultural Alliance also thanks Michelle Bowen and Melissa Menzer, Ph.D. for their assistance in this project.


MORE INFORMATION, CITATIONS + RESOURCES PHILACULTURE.ORG/PREK

With additional financial support by The CHG Charitable Trust and The Lida Foundation

THE IMPACT OF ARTS AND CULTURE

AGENDA:

PUBLIC PRE-K STUDENTS SEE 44% MORE GROWTH IN IMPORTANT STEM SKILLS SUCH AS NUMBER CONCEPTS + ADDITION AND SUBTRACTION

*These are key predictors of reading success in elementary school

MORE INFORMATION, CITATIONS + RESOURCES PHILACULTURE.ORG/PREK

Lead Sponsor: PECO

Public Health Management Corporation

Read by 4th Campaign

Terri Lynne Lokoff Child Care Foundation

United Way of Greater Philadelphia & Southern New Jersey

Urban Affairs Coalition

Additional Financial Support by The CHG Charitable Trust and The Lida Foundation

Photograph courtesy of Settlement Music School    FRONT PANEL PHOTO: Photograph courtesy of Please Touch Museum


IMPACT: PHYSICAL

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program at Philadelphia’s Settlement Music School, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxic stress can later lead to diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty, and disability.

“Just as exercise builds physical fitness, music can ‘tone’ young brains & bodies.”

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

IMPACT: SOCIAL & EMOTIONAL

Mr. Katz, a multiple Emmy-award winning producer in Philadelphia’s Fairmount neighborhood, produces projects based on learning and integrates multimodal art education seamlessly into its Pre-K curriculum. A recent project shifted the focus from teaching art to developing artists by building literacy skills, studying music, exploring the culinary arts and sharing in the Early Years.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

SUMMARY

From our earliest ages, we learn through movement, sound and color.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

Agenda: Pre-K is the first in a series of followup tools that outline the impact of arts and culture not only on the economic but also on the issues that most affect our daily lives: education, the economy but also on the issues that most affect our daily lives: education, wellness, social justice and more.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

**IMPACT: PHYSICAL**

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program at Philadelphia’s Settlement Music School, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxic stress can later lead to diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty, and disability.

“Just as exercise builds physical fitness, music can ‘tone’ young brains & bodies.”

** IMPACT: SOCIAL & EMOTIONAL **

Mr. Katz, a multiple Emmy-award winning producer in Philadelphia’s Fairmount neighborhood, produces projects based on learning and integrates multimodal art education seamlessly into its Pre-K curriculum. A recent project shifted the focus from teaching art to developing artists by building literacy skills, studying music, exploring the culinary arts and sharing in the Early Years.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

**SUMMARY**

From our earliest ages, we learn through movement, sound and color.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

Agenda: Pre-K is the first in a series of followup tools that outline the impact of arts and culture not only on the economic but also on the issues that most affect our daily lives: education, the economy but also on the issues that most affect our daily lives: education, wellness, social justice and more.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

**IMPACT: PHYSICAL**

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program at Philadelphia’s Settlement Music School, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxic stress can later lead to diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty, and disability.

“Just as exercise builds physical fitness, music can ‘tone’ young brains & bodies.”

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

**IMPACT: SOCIAL & EMOTIONAL**

Mr. Katz, a multiple Emmy-award winning producer in Philadelphia’s Fairmount neighborhood, produces projects based on learning and integrates multimodal art education seamlessly into its Pre-K curriculum. A recent project shifted the focus from teaching art to developing artists by building literacy skills, studying music, exploring the culinary arts and sharing in the Early Years.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

**SUMMARY**

From our earliest ages, we learn through movement, sound and color.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

Agenda: Pre-K is the first in a series of followup tools that outline the impact of arts and culture not only on the economic but also on the issues that most affect our daily lives: education, the economy but also on the issues that most affect our daily lives: education, wellness, social justice and more.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

**IMPACT: PHYSICAL**

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program at Philadelphia’s Settlement Music School, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxic stress can later lead to diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty, and disability.

“Just as exercise builds physical fitness, music can ‘tone’ young brains & bodies.”

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

**IMPACT: SOCIAL & EMOTIONAL**

Mr. Katz, a multiple Emmy-award winning producer in Philadelphia’s Fairmount neighborhood, produces projects based on learning and integrates multimodal art education seamlessly into its Pre-K curriculum. A recent project shifted the focus from teaching art to developing artists by building literacy skills, studying music, exploring the culinary arts and sharing in the Early Years.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

**SUMMARY**

From our earliest ages, we learn through movement, sound and color.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

Agenda: Pre-K is the first in a series of followup tools that outline the impact of arts and culture not only on the economic but also on the issues that most affect our daily lives: education, the economy but also on the issues that most affect our daily lives: education, wellness, social justice and more.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.
**IMPACT: PHYSICAL**

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program at Philadelphia's Settlement Music School, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxie stress can later lead to diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty, and disability.

"Just as exercise tones young muscles, music can 'tone' young brains & bodies."

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

**IMPACT: SOCIAL & EMOTIONAL**

The Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more.

"The Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more."

Dr. Carla, a multiple Grammy award-winning professor in Philadelphia’s Fairmount neighborhood, provides arts-based learning and integrates multimodal art education seamlessly into its Pre-K curriculum. A recent project shifted the focus from teaching art to developing artists by building literacy skills, studying music, and expanding children’s abilities to regulate stress, the equivalent of 1.3 months of STEM knowledge.

Wolf Trap classrooms develop STEM integrated curriculum and provides quality performing arts experiences. Wolf Trap classrooms develop STEM skills and expand the received vocabulary necessary for success in elementary school.

In combatting high cortisol levels and improving children’s abilities to regulate stress, the Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more.

**IMPACT: COGNITIVE**

Between the ages of 6 and 10, children are in the prime of learning and understanding complex ideas. Music and lyrics help develop language and literacy skills and expand the received vocabulary necessary for success in elementary school.

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program at Philadelphia’s Settlement Music School, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxie stress can later lead to diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty, and disability.

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

**PRE-K ARTS STUDENTS EXPERIENCE 65% MORE POSITIVE EMOTIONS: INTEREST, HAPPINESS, + PRIDE that have a long-term impact on the child’s ability to learn.**

**CLOSING THE WORD GAP**

According to the National Institute of Child Health and Human Development, children who are read to daily are 3 years ahead in vocabulary by age 3. Children who are read to an average of 14 hours per week up to age 3 experience 60% more growth in vocabulary.

**IMPACT: PHYSICAL**

"Just as exercise tones young muscles, music can ‘tone’ young brains & bodies."

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

**IMPACT: SOCIAL & EMOTIONAL**

The Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more.

"The Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more."

Dr. Carla, a multiple Grammy award-winning professor in Philadelphia’s Fairmount neighborhood, provides arts-based learning and integrates multimodal art education seamlessly into its Pre-K curriculum. A recent project shifted the focus from teaching art to developing artists by building literacy skills, studying music, and expanding children’s abilities to regulate stress, the equivalent of 1.3 months of STEM knowledge.

Wolf Trap classrooms develop STEM integrated curriculum and provides quality performing arts experiences. Wolf Trap classrooms develop STEM skills and expand the received vocabulary necessary for success in elementary school.

In combatting high cortisol levels and improving children’s abilities to regulate stress, the Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more.

**IMPACT: COGNITIVE**

Between the ages of 6 and 10, children are in the prime of learning and understanding complex ideas. Music and lyrics help develop language and literacy skills and expand the received vocabulary necessary for success in elementary school.

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program at Philadelphia’s Settlement Music School, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxie stress can later lead to diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty, and disability.

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

**IMPACT: PHYSICAL**

"Just as exercise tones young muscles, music can ‘tone’ young brains & bodies."

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

**IMPACT: SOCIAL & EMOTIONAL**

The Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more.

"The Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more."

Dr. Carla, a multiple Grammy award-winning professor in Philadelphia’s Fairmount neighborhood, provides arts-based learning and integrates multimodal art education seamlessly into its Pre-K curriculum. A recent project shifted the focus from teaching art to developing artists by building literacy skills, studying music, and expanding children’s abilities to regulate stress, the equivalent of 1.3 months of STEM knowledge.

Wolf Trap classrooms develop STEM integrated curriculum and provides quality performing arts experiences. Wolf Trap classrooms develop STEM skills and expand the received vocabulary necessary for success in elementary school.

In combatting high cortisol levels and improving children’s abilities to regulate stress, the Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more.

**IMPACT: COGNITIVE**

Between the ages of 6 and 10, children are in the prime of learning and understanding complex ideas. Music and lyrics help develop language and literacy skills and expand the received vocabulary necessary for success in elementary school.

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program at Philadelphia’s Settlement Music School, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxie stress can later lead to diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty, and disability.

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

**IMPACT: PHYSICAL**

"Just as exercise tones young muscles, music can ‘tone’ young brains & bodies."

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

**IMPACT: SOCIAL & EMOTIONAL**

The Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more.

"The Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more."

Dr. Carla, a multiple Grammy award-winning professor in Philadelphia’s Fairmount neighborhood, provides arts-based learning and integrates multimodal art education seamlessly into its Pre-K curriculum. A recent project shifted the focus from teaching art to developing artists by building literacy skills, studying music, and expanding children’s abilities to regulate stress, the equivalent of 1.3 months of STEM knowledge.

Wolf Trap classrooms develop STEM integrated curriculum and provides quality performing arts experiences. Wolf Trap classrooms develop STEM skills and expand the received vocabulary necessary for success in elementary school.

In combatting high cortisol levels and improving children’s abilities to regulate stress, the Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more.

**IMPACT: COGNITIVE**

Between the ages of 6 and 10, children are in the prime of learning and understanding complex ideas. Music and lyrics help develop language and literacy skills and expand the received vocabulary necessary for success in elementary school.

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program at Philadelphia’s Settlement Music School, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxie stress can later lead to diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty, and disability.

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

**IMPACT: PHYSICAL**

"Just as exercise tones young muscles, music can ‘tone’ young brains & bodies."

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.

**IMPACT: SOCIAL & EMOTIONAL**

The Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more.

"The Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more."

Dr. Carla, a multiple Grammy award-winning professor in Philadelphia’s Fairmount neighborhood, provides arts-based learning and integrates multimodal art education seamlessly into its Pre-K curriculum. A recent project shifted the focus from teaching art to developing artists by building literacy skills, studying music, and expanding children’s abilities to regulate stress, the equivalent of 1.3 months of STEM knowledge.

Wolf Trap classrooms develop STEM integrated curriculum and provides quality performing arts experiences. Wolf Trap classrooms develop STEM skills and expand the received vocabulary necessary for success in elementary school.

In combatting high cortisol levels and improving children’s abilities to regulate stress, the Agenda series highlights existing tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, the economy, health, wellness, social justice and more.

**IMPACT: COGNITIVE**

Between the ages of 6 and 10, children are in the prime of learning and understanding complex ideas. Music and lyrics help develop language and literacy skills and expand the received vocabulary necessary for success in elementary school.

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program at Philadelphia’s Settlement Music School, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxie stress can later lead to diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty, and disability.

Scientific studies show that music, dance and visual arts classes significantly lower the toxic stress levels of children.
SUMMARY
From our earliest ages, we learn through movement, sound and color. What and how we learn as young children extends through elementary school and into adulthood, affecting even health and well-being. As policymakers work to expand quality Pre-K, it is increasingly apparent — through both academic study and experience in the field — that arts integration in Pre-K is key to its success.

IMPACT: PHYSICAL
In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program at Philadelphia’s Settlement Music School, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxic stress can later lead to diabetes, high blood pressure, heart disease, incarcerated, unemployment, poverty, and disability. Scientific studies show that music, dance and visual arts classes significantly lower toxic stress levels and improving children’s abilities to regulate stress, the prosocial behavior, the executive function, the language development, the academic achievement in school, and the emotional development in school. Wolf Trap classrooms develop STEM integrated curriculum and provides quality performing arts program, which educates teachers in effective arts-based learning and integrates multimodal art education into the elementary classroom. In combatting high cortisol levels and improving children’s social and emotional skills and expand the received vocabulary necessary for success in elementary school. Wolf Trap arts-integrated classroom, students gained the equivalent of 1.3 months of STEM knowledge.

CLOSING THE WORD GAP
Pre-K arts students experience 80% more positive emotions:

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean Word Gap (per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Class</td>
<td>1,846</td>
</tr>
<tr>
<td>Average Child</td>
<td>2,153</td>
</tr>
<tr>
<td>Professional</td>
<td>2,775</td>
</tr>
</tbody>
</table>


Why Making Music

INTEREST, HAPPINESS + PRIDE that have a long-term impact on the child’s ability to learn.

Pre-K arts students experienced 80% more positive emotions:

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean Word Gap (per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Class</td>
<td>1,846</td>
</tr>
<tr>
<td>Average Child</td>
<td>2,153</td>
</tr>
<tr>
<td>Professional</td>
<td>2,775</td>
</tr>
</tbody>
</table>

IMPACT: SOCIAL & EMOTIONAL
Mr. Carlos, a multiple Spanish immersion preschool in Philadelphia’s Fairmount neighborhood, practices project-based learning and integrates multimodal art education into the elementary classroom. A project-based learning is a focus on building projects by building literacy skills, developing music, building local connections, and exploring the culinary arts.

**Human Development and Early Childhood Matters**

**Source:** Brown, E. D., Benedett, B., & Armistead, M. 2014.

**Source:** Menzer, M., Armstrong, L., & Ecker, E. 2017.

**Source:** Carland, M., Armstrong, L., & Ecker, E. 2017.

**Source:** Wolf, D. 2015.

**Source:** Brown, E. D., & Sax, K. L., 2014.

**Source:** Brown, E. D., & Sax, K. L., 2014.

**Source:** Brown, E. D., & Sax, K. L., 2014.
Impact: Physical

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, an arts-integrated Head Start program in Philadelphia’s Fairmount neighborhood, practices project-based learning and integrates multimodal art education seamlessly into its Pre-K curriculum. A recent project shifted the focus from teaching art to developing artists by building children’s abilities to regulate stress, the immune system, and cortisol levels and improving children’s health in the Pre-K years and beyond.

Impact: Social & Emotional

M. Carolan, a multiple-award-winning researcher in Philadelphia’s Fairmount neighborhood, is working on a project that uses arts education as a tool for social and emotional learning. The project, called the Kaleidoscope program, proves that arts positively impact physical and mental health and wellbeing, social justice and more.

Impact: Cognitive

Scientific studies show that music, dance, and visual arts classes significantly lower the toxic stress levels of children.

Pre-K Arts students experience 60% more positive emotions: INTEREST + PRIDE that have a long-term impact on the child’s ability to learn.

HAPPINESS + INTEREST = success in school.

And the arts add up: after one year in a Wolf Trap pre-K immersion classroom, students gained the equivalent of 1.7 months of STEM knowledge. After two years, students gained an additional 1.3 months of STEM knowledge.

Closing the Word Gap

Word gap that is often the key to later success. After kindergarten, the average child in professional-family households hears 500 words per hour. By age three, the average child in family on welfare has heard 1000 words. By age five, the equivalent of 1.3 months of STEM knowledge.

Summary

From our earliest ages, we learn through movement, sound and color. What and how we learn are important, and early childhood experiences are critical. As policymakers focus on expanding quality Pre-K, it is increasingly apparent — through both academic study and experience in the field — that arts integration in Pre-K is key.

Agenda: Pre-K is the first in a series of the Agenda series that outlines the impact of arts and culture not only on the economic but also on the issues that most affect our daily lives: education, the economy but also on the issues that impact our health, social justice and more.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in the Commonwealth and across the country.

Greater Philadelphia Cultural Alliance | Agenda: Pre-K

Pre-K arts students experience 60% more positive emotions: INTEREST + PRIDE that have a long-term impact on the child’s ability to learn.
The Greater Philadelphia Cultural Alliance would like to thank its project partners and advisory committee members, including: Victoria Ankrah, Acelero; Eleanor Brown, Ph.D., West Chester University; Diane Castelbuono, School District of Philadelphia; Kathy Hirsh-Pacek, Temple University; Ann O’Brien, Montgomery Early Learning Centers; Karen Pollack, Maternity Care Coalition; Lola Rooney, Philadelphia YMCA; Betsy Vassallo, Southeast Regional Key; and Barbara Wasik, Temple University, all of whom supplied valuable resources, input and guidance. The Cultural Alliance also thanks Michelle Bowen and Melissa Menzer, Ph.D. for their assistance in this project.

The Greater Philadelphia Cultural Alliance would like to thank its project partners and advisory committee members, including: Victoria Ankrah, Acelero; Eleanor Brown, Ph.D., West Chester University; Diane Castelbuono, School District of Philadelphia; Kathy Hirsh-Pacek, Temple University; Ann O’Brien, Montgomery Early Learning Centers; Karen Pollack, Maternity Care Coalition; Lola Rooney, Philadelphia YMCA; Betsy Vassallo, Southeast Regional Key; and Barbara Wasik, Temple University, all of whom supplied valuable resources, input and guidance. The Cultural Alliance also thanks Michelle Bowen and Melissa Menzer, Ph.D. for their assistance in this project.


RESEARCH
PRE-K MAKES THE DIFFERENCE:

PUBLIC PRE-K STUDENTS SEE 44% MORE GROWTH IN IMPORTANT STEM SKILLS SUCH AS NUMBER CONCEPTS + ADDITION AND SUBTRACTION

THAT'S THE EQUIVALENT OF AN EXTRA CLASS TIME

MORE INFORMATION, CITATIONS + RESOURCES

PHILACULTURE.ORG/PREK

© 2017 by the Greater Philadelphia Cultural Alliance
Published by The Greater Philadelphia Cultural Alliance, Maud Lyon, President
Lead Author: Anne Marie Rhoades, Director of Policy & Community Engagement
Project Director: Michael Norris, Vice President of External Relations
Kristen Gillette, Web & Communications Specialist
Design by SWELL

Photograph courtesy of Settlement Music School    FRONT PANEL PHOTO: Photograph courtesy of Please Touch Museum

SOURCE:


The Greater Philadelphia Cultural Alliance would like to thank its project partners and advisory committee members, including: Victoria Ankrah, Acelero; Eleanor Brown, Ph.D., West Chester University; Diane Castelbuono, School District of Philadelphia; Kathy Hirsh-Pacek, Temple University; Ann O’Brien, Montgomery Early Learning Centers; Karen Pollack, Maternity Care Coalition; Lola Rooney, Philadelphia YMCA; Betsy Vassallo, Southeast Regional Key; and Barbara Wasik, Temple University, all of whom supplied valuable resources, input and guidance. The Cultural Alliance also thanks Michelle Bowen and Melissa Menzer, Ph.D. for their assistance in this project.


MORE INFORMATION, CITATIONS + RESOURCES PHILACULTURE.ORG/PREK

THE IMPACT OF ARTS AND CULTURE

AGENDA: PRE-K

PRE-K MAKES THE DIFFERENCE: PUBLIC PRE-K STUDENTS SEE 44% MORE GROWTH IN IMPORTANT STEM SKILLS SUCH AS NUMBER CONCEPTS + ADDITION AND SUBTRACTION

31% Higher

that's the equivalent of extra class time

pre-K: the gift that keeps on giving

100% increase in quality of life

31% higher

20% of individuals

with pre-k

percent of individuals

Print awareness and literacy increase by 85%

24% higher

100% increase in IQ over 90

28%

40%

45%

60%

67%

31%

49%

15%

5%

% of individuals

with pre-k

without pre-k


Project Partners

© 2017 by the Greater Philadelphia Cultural Alliance
Published by The Greater Philadelphia Cultural Alliance, Maud Lyon, President
Lead Author: Anne Marie Rhoades, Director of Policy & Community Engagement
Project Direction: Michael Norris, Vice President of External Relations
Kristen Gillette, Web & Communications Specialist
Design by SWELL

Photograph courtesy of Settlement Music School
Front panel photo: Photograph courtesy of Please Touch Museum


Published by: The Greater Philadelphia Cultural Alliance, Maud Lyon, President
Lead Author: Anne Marie Rhoades, Director of Policy & Community Engagement
Project Director: Michael Norris, President of Strategic Initiatives
Lead Designer: Kristen Gillette, Web & Communications Specialist

Design by SWELL