# Education Initiative Coalition

August 17, 2023



# Welcome!



Carrie Arblaster
VP, Public Policy
Philanthropy Ohio



### **Education Policy Priorities 2023-24**

- Advance anti-racist and anti-discriminatory policies and practices in P-20 education.
- Improve access to whole child comprehensive supports in schools across the state.
- Invest in high-quality early childhood education. Support early literacy and two-generation approaches.
- Ensure students have access to high-quality educators by investing recruitment and retention efforts.
- Anchor the state's school funding system in adequacy, predictability and equity.
  - Make significant investments in K-12 education, particularly for students of color, those living in low-income households or rural areas and those with other needs.
- Position Ohio's students on solid pathways through K-12 education, post-secondary education and into careers.
- Boost college affordability by:
  - Increasing statewide FAFSA completion rates, related professional development and family supports;
     and
  - Increasing investments in Ohio College Opportunity Grants and expanding eligibility to more students.



# Agenda

|    | Agenda Item  | Lead   | Time      |
|----|--|--|-----------|
| 1. | Welcome & Introductions  | Carrie Arblaster, Philanthropy Ohio  | 1:00 p.m. |
| 2. | State education budget     School funding     Higher ed  | Greg Bennett and Megan Richwine, Byers, Minton & Associates Carrie Arblaster, Philanthropy Ohio  | 1:05 p.m. |
| 3. | State early learning budget  | Beth Hess, Managing Director, Policy, Groundwork Ohio  | 1:35 p.m. |
| 4. | Member Sharing Questions:  What are your top education priorities?  Where could you use feedback from peers? | All  | 2:00 p.m. |
| 5. | Reimagining Preschool     Lorain City Schools  | Linda Coad, Executive Director of Exceptional Children<br>Ross May, Assistant Superintendent<br>Alisha Pardon, Assistant Director of Preschool | 2:25 p.m. |
|    | Opportunities to Re-Shift     Lorain County     Community College  | Michele Henes, Director Children's Learning Center,<br>LCCC Commodore Kids Programs Professor  |           |
| 6. | Wrap-Up and Next Steps   | Carrie Arblaster   | 3:25 p.m. |



### **Ohio Education Policy Update**



Greg Bennett
Partner
Byers, Minton and
Associates



# Philanthropy Ohio

# Ohio Education Policy Update

**August 17, 2023** 



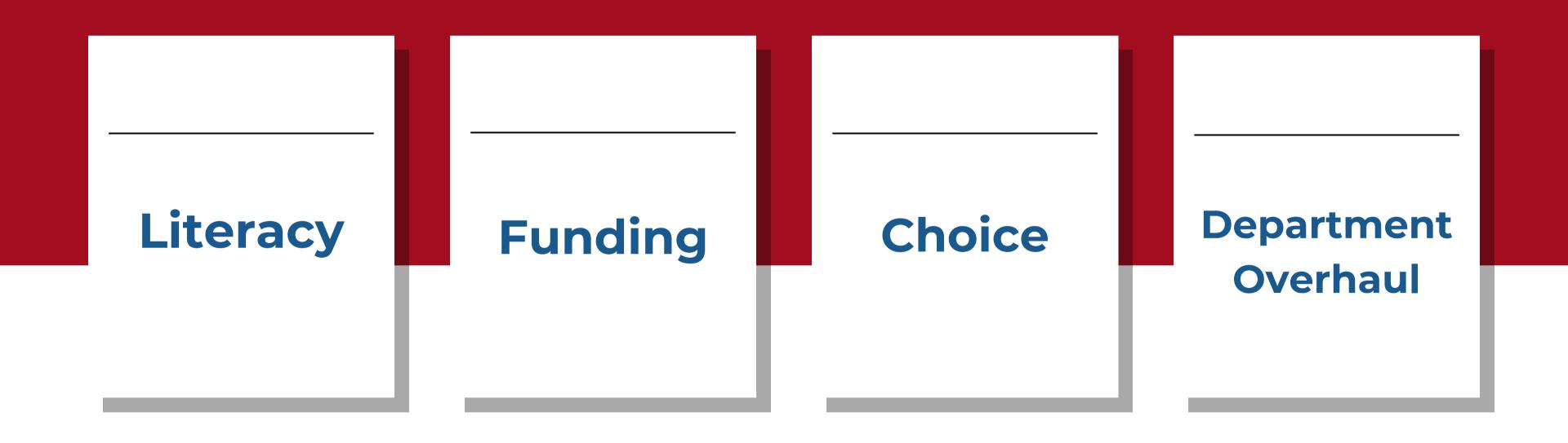
# Agenda



- 3 Budget Overview
- 4 Literacy
- **5** Education Funding
- 6 Choice Expansion
- 7 Department Overhaul
- 7 Other Election & Political Updates



# HB 33: Education Policy





# Literacy

#### ReadOhio Initiative

- Aims to spread the adoption of the "science of reading" in schools.
- Prioritizes systematic instruction in phonics, phonemic awareness, vocabulary, fluency, and comprehension.
- Promotes high-quality instruction materials, teacher training, and placement of literacy coaches in high-need districts.

# Funding

#### • K-12 Funding

- State spending on public K-12 education increases to \$8.06 billion in FY 2024 and nearly \$8.3 billion in FY 2025.
- Updated funding formula = increase of \$1.18 billion from FY 2023 to FY 2024 for Traditional School Districts, Joint Vocational School Districts, Community schools, and STEM schools.



# Choice Expansion

#### • EdChoice Scholarship Program

- o Creates universal eligibility regardless of income level.
- Increases scholarship amounts to \$6,165 for k-8 and \$8,407 for high school students.
- Increases the threshold to approximately \$135,000 (450% FPL) for full awards.
- Families above the threshold are eligible for prorated scholarships starting at a minimum of \$950 for high school students.



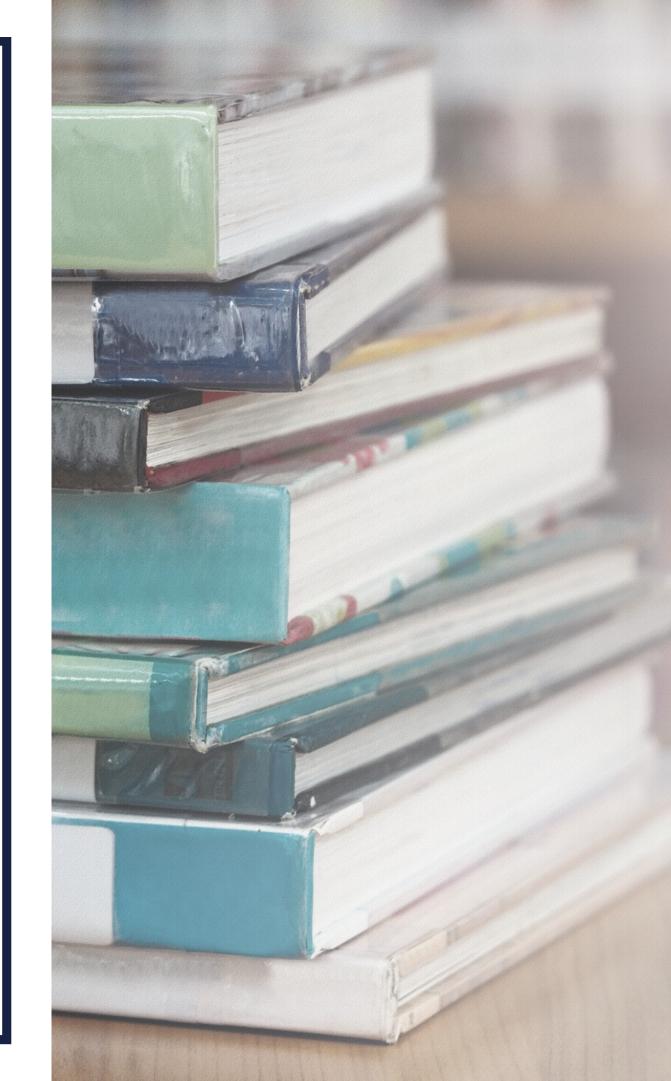
# Department Overhaul

#### • ODE Restructuring

 Restructures the Ohio Department of Education (ODE) into the newly created DEW (Department of Education and Workforce).

#### Consists of two divisions:

- Division of Career-Technical Education
- Division of Primary and Secondary Education.
- Each division is led by a Deputy Director who serves on the Governor's Executive Workforce Board, reporting to the DEW Director, who serves in the Governor's cabinet.



# Higher Education

#### Ohio College Opportunity Grant (OCOG)

- Increases funding to historic levels \$200M each fiscal year.
- The current OCOG program is funded at \$112M.
   This represents a 79 percent increase to the entire program.

#### • FAFSA Support Teams

 Established a statewide system of FAFSA support teams to support school districts, community schools, and STEM schools. Funds \$1M in FY 25 to support the support teams.





# Children's Care

#### School-Based Health

- \$15 million over the biennium for SBHC, to be used by ODH, in consultation with ODE, to support centers in high-need counties.
- \$30,000,000 to the newly created Child Care Infrastructure Fund
  - Used for grants to provide safe and developmentally appropriate child care for infants and toddlers in communities with high infant mortality rates.

# State Political Landscape

**Ohio Political Environment & Dynamics** 

#### Legislature

House Speakership
Senate/House
Dynamic
Senate Leadership

#### **Issue 1**

60% threshold
Signatures: 5% from 88
Repeals Cure Period

#### Redistricting

September Process
OSC Map Review
USSC: ISL Theory

#### **November Ballot**

Reproductive Rights Recreational Marijuana



# Questions

#### **Contact Details**

#### **Mailing Address**

88 E. Broad St. #1650 Columbus, OH 43215

#### **Email Adadress**

greg@byersminton.com



# Find Us Online



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www.byersminton.com

### **Early Learning Update**



Beth Hess

Managing Director, Policy
Groundwork Ohio



Philanthropy Ohio: Education Initiative Meeting August 17, 2023

## Thanks for Having Me!



Beth Hess Managing Director, Policy



### Groundwork Ohio's Mission

Groundwork Ohio is a committed, nonpartisan public-policy research and advocacy organization formed in 2004 that champions high-quality early learning and healthy development strategies from the prenatal period to age five, that lay a strong foundation for Ohio kids, families and communities.







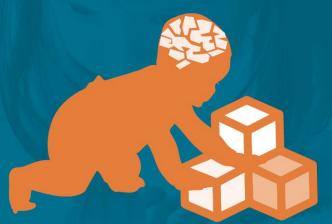


### What We Do

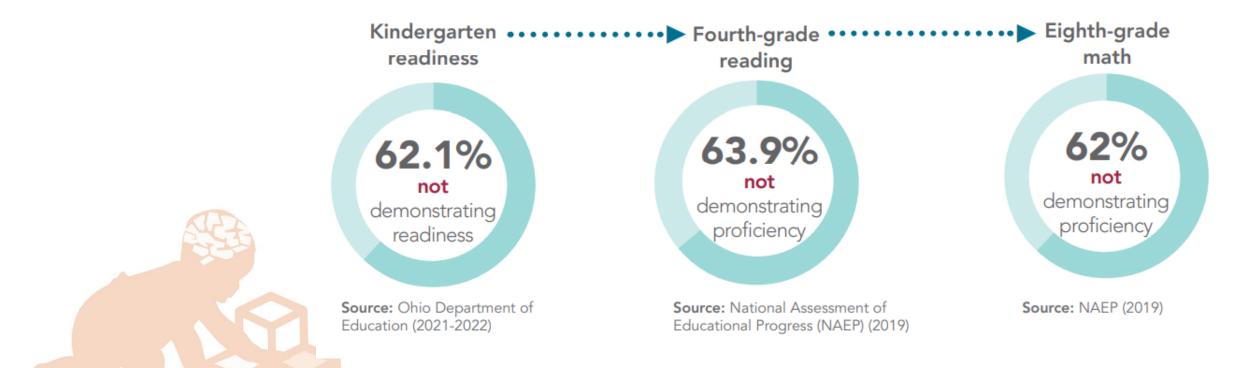
We advance quality early childhood systems in Ohio by engaging, educating, and mobilizing diverse stakeholders and strategic partners to promote data-driven and evidence-based early childhood policies.



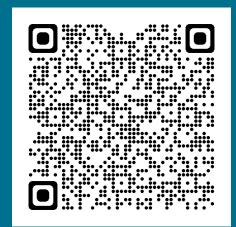
# FY 24-FY 25 Budget: A Critical Moment in Time for Young Children

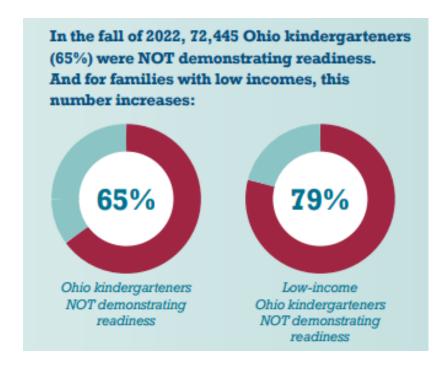


### Kids Who Start Behind Often Stay Behind

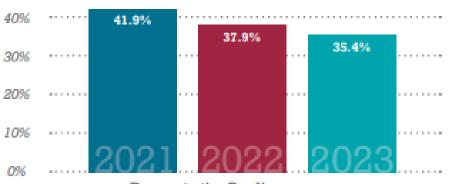


Fall 2022 Kindergarten
Readiness Assessment
results revealed there
are more children in
Ohio entering
kindergarten not
demonstrating
readiness than <u>ever</u>.





The percentage of Ohio's kindergartners demonstrating readiness on the Kindergarten Readiness Assessment for the last three years.



Demonstrating Readiness

# Why are children in Ohio starting and staying behind?

Ohio policymakers must invest in evidence-based solutions that will correct the current downward trajectory and allow Ohio's children to thrive.

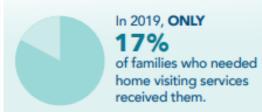
**Less than 1 in 5** Ohio babies from families with low incomes have access to any early learning program.

More than half (57%) of 3- and 4-year-olds are not enrolled in preschool.



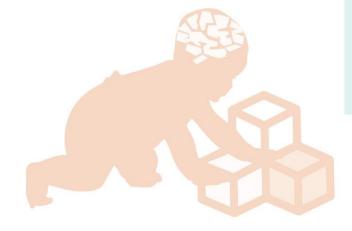
In fact, Ohio's publicly funded child care programs are serving **22,000 fewer children** today than they were prior to the pandemic.

Ohio ranks 31st in infant maltreatment. The rate of child abuse and neglect (maltreatment) for Ohio infants increased by 20% from 2017 to 2020.

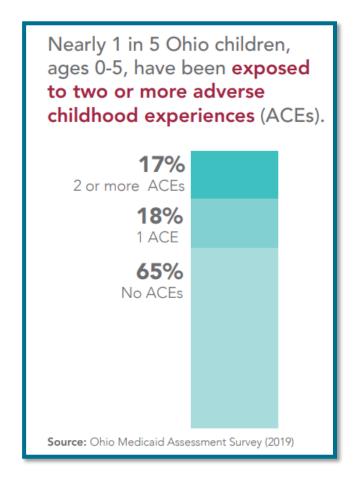


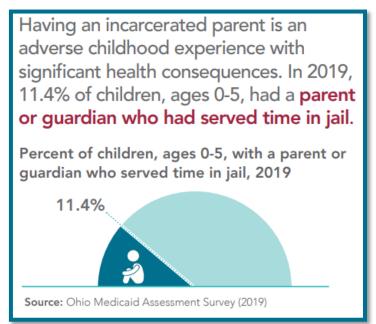
There are only **6.4 early childhood credentialed mental health service providers per 10,000 children** ages 0-5 in Ohio.



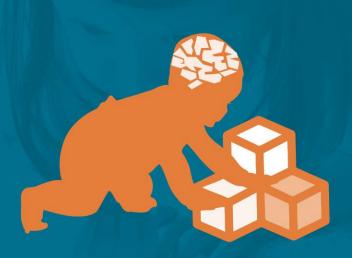


Adverse Childhood
Experiences (ACES)
are impacting
children's healthy
development.





# Your Advocacy Matters!



#### Prioritize Investments in Child Care in the State Budget AN OPEN LETTER TO OHIO POLICYMAKERS



#### Dear Members of the Ohio General Assembly,

For businesses to compete, grow, and succeed—and for Ohio's economy to thrive—we must build a strong workforce foundation and pipeline for continually increasing participation.

The child care crisis facing our state is among the primary challenges in recruiting and retaining reliable and productive workers. Parents' decisions about work are greatly impacted by whether they have access to quality, affordable child care. The harsh reality is, in our state, they all-too-often do not.



Make no mistake-this is a crisis that is also hamstringing our economy. In fact, the ack of quality child care for children ages three and younger is costing our country \$122 billion a year in lost earnings, productivity, and revenue, and Ohio's economy loses an estimated \$3.9 billion per year due to child care issues, according to the Council for a Strong America, ReadyNation Report from February 2023.



Our state and our businesses are in dise need of strategic state investment in early childhood ducation, as expanding access to publicly funded childcare will help more people enter and remain in the workforce. Not only will it address the workforce challenges of today, but access to quality early childhood education is a two-generation workforce approach that also prepares the future workforce for school, career, and lifelong success. Research shows these ments have a domino effect, with each step predictive of the next—from kindergarten readiness to third grade reading achievement to eighth grade math achievement to high hool graduation to postsecondary attainment. Ultimately, public policy to improve outcomes for our youngest Ohioens will also ensure the workforce of tomorrow is prepared

That is why we-business and community leaders from across the state of Ohio-are strongly urging our state legislature to protect and pass through the upcoming biennial budget the new investments to increase accessibility and effordability of quality early education proposed by Governor DeWine. This includes the following measures:

- . Child Care Capacity: An investment of \$150 million of state ARPA funds to provide child care scholarships and to increase infant and toddler child care capacity in communities throughout the state.
- Child Care Eligibility: An expansion of the state's publicly-funded child care program from 142% of the Federal Poverty Level (FPL) to 160%, which would result in more than 15,000 children and families gaining access to care
- Preschool: An additional \$46 million per year in Early Childhood Education grants. estimated to expand preschool to an additional 11.525 children under 200% FPL

Even with these targeted investments, too many children and their families will still be left out. They are just the beginning of what is needed to fully address the child care crisi

















COLUMBUS





















#### An Open Letter FROM OHIO PARENTS to Ohio Policymakers

WE NEED YOU TO INVEST IN CHILD CARE

#### Dear Members of the Ohio General Assembly,

We are parents. We are coming together to deliver a very important message: Ohio's parents need your help. For years now, we've been calling for the state to increase the support of families and children by addressing the child care crisis. Instead, year after year, the situation has worsened. For us, for our children, and for the good of us all, please hear us now—our child care system is failing and children are suffering without access to vital services. We need increased investment for children and families in Ohio's biennial budget.

We are also the workforce. We help Ohio's major companies stay strong and small businesses grow. We start businesses. We support communities. We can only be parents and workers if we have safe, high-quality child

We are struggling. From our biggest cities to our rural communities, child care solutions for parents are all-too-often out of reach for families of all incomes. Limited access to reliable, safe child care is impacting all of us-families, communities, and businesses. Centers are closing, waitlists are growing. While we work, our babies, toddlers, and preschoolers need a place to go that is nurturing, supportive, and healthy. Access to child care will enable our children to grow and learn. That will enable us to work and earn.

We aren't alone. A new statewide survey found that more than two-thirds of non-working or part-time working Ohio moms say they would go back to work or work more hours if they could access high-quality and affordable child care, and four-in-10 working parents have cut back on their work hours to care for their children. This survey is just one more in a long line of research and reports that tell the same story over and over again—the child care crisis hurts children, families, and communities. It is costing Ohio.

We need your help. We, the undersigned, are feeling the brunt of Ohio's child care shortcomings. We see the desperate need for more affordable and accessible child care options. Ohio's biennial budget, which is currently being negotiated, is the prime opportunity for our state to make robust and impactful investments to save child care. To expand early learning. To improve the health and well-being of young children. This investment would allow more parents to work now, and more children to have the strong, safe start in life that they deserve.

We are speaking up. We are asking our elected leaders in the Ohio legislature to take action in Ohio's biennial budget for parents and for the future of our state—our children.

Pava Anderson Mostoomer Country Betty Cantley, Lorgin County Malissa Harris, Franklin County Christina Holden, Montoomery Co. Joe Janes Clement County Lori Jarvis, Clermont County Mario Johnson, Lorain County Rebekah Johnson, Lorain County Luz Martinez, Cavahoon County Patricia Tomlinson, Stark County Eric Unger, Licking County Holly Unger, Licking County Guadalupe Bright, Franklin County Monique Compton, Stark County Charis Davis, Scioto County Shaba Douglas, Franklin County Christina Hutton, Miami County Brianna Johnson, Hamilton County Sara Madden, Richland County Alecia Murray, Allen County Talisa Norman, Cuyahoga County Raya Anderson, Montgomery Coun Betty Cantley, Lorain County Christina Holden, Montgomery Coun Mario Johnson, Lorain County

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PARENTS: Add your name to this letter for Ohio policymakers! Visit groundworkohio.org/parents





-RESTAURANT-















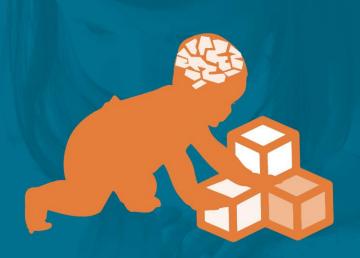






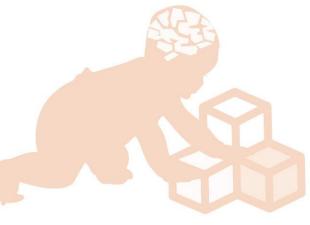


# State Operating Budget: Early Learning



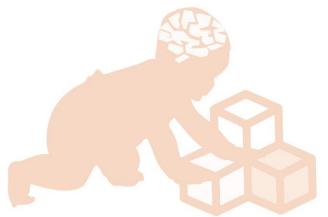
## Governor's Proposed Budget

- Early Intervention: Continued investment of \$46.8M over the biennium
- **Home Visiting:** \$36.7M increase over the biennium for Help Me Grow
- **Infant Vitality:** \$11.2M increase over the biennium in infant vitality supports and resources
- Ohio Family Children First Council: an additional \$1.3M/year to nearly double annual investment
- **\$8M** per year of continued support of Dolly Parton Imagination Library
- **Expansion** in eligibility from 142% to 160% FPL
  - More than 15,000 children will gain access.
- \$150M in State ARPA to provide scholarships and increase infant/toddler capacity.
- \$46M/year increased investment in ODE Early Childhood Education
  - Estimated to serve an additional 11,525 children under 200% FPL



### House Version

- Preschool: Included an amendment to increase by \$16M per FY
- Infant & Toddler Child Care Infrastructure Grant: Included and appropriates \$15 million in each fiscal year in the new Fund, Child Care Infrastructure, from FY23 ending GRF cash to provide safe and developmentally appropriate child care for infants and toddlers in Appalachian communities and communities with high infant mortality rates.
- 0-3 continuous eligibility in Medicaid



### Senate Version

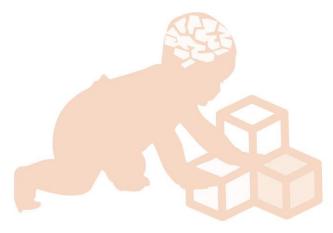
- Cut early childhood programming funding by nearly half a billion dollars as compared to the Governor's proposal.
- Publicly Funded Child Care Eligibility- Sets the maximum amount of family income for initial eligibility at 145% FPL
- Publicly funded child care providers license capacity exemption to Step Up to Quality ratings- Expands the existing exemptions from the Step Up to Quality rating requirement for a licensed child care program providing publicly funded child care to less than 25% of its license capacity, by increasing that percentage to less than 50%.



### Key Highlights in Early Learning



- Included the House amendment for \$30 million for infant/toddler child care.
- Included \$124 million for preschool.
- A line-item veto from Governor DeWine that improves the state operating budget by striking a provision that would have exempted more licensed child care programs from meeting Step Up to Quality rating requirements.
- New cabinet level launched in the budget: The Ohio Department of Children and Youth will address the critical needs of children and families



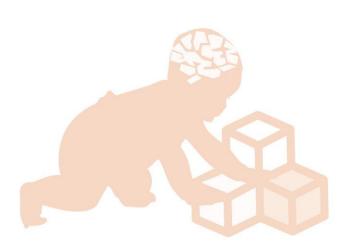
### Where the Budget Fell Short

### Unfortunately, this budget falls short in several ways. Included in this budget were:

- 1. Policies that continue to undermine the early childhood education profession
- 2. A failure to dramatically expand publicly funded child care eligibility to 160% FPL. (increased to 145%)
- 3. A failure to make the investments needed to sustain the publicly funded child care system



### Significant Policy Updates



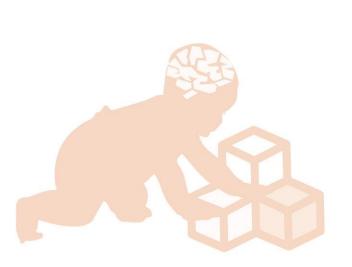
#### 1. Updates to Early Childhood Education Grant:

- Three- and four-year-olds are now both eligible at the start of the school year
- Grant increased from \$4,000 to \$4,250 per slot (post budget)
- 2. Step Up to Quality: The final budget included a prohibition on Step Up To Quality from considering whether administrators and teachers at a given facility have college diplomas when determining a rating for that program.
- **3. Teacher Licensure Range:** Changed teacher license bands from Prek-5, 4-9 and 7-12 to **Prek-8 and 6-12**.





## Implementing Key Provisions

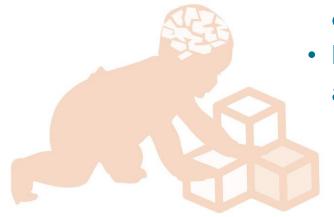


- 1. Department of Children and Youth: Gov. Mike DeWine announced he will be nominating Kara Wente as the inaugural Director of the new agency. A transition team has been identified and is leading stakeholder meetings to develop strategic plan.
- 2. Preschool Expansion: The Office of Early Learning and School Readiness at the Ohio Department of Education will move to the new agency (DCY) but is already developing and implementing expansion policy through ODE.
- **3. Child Care Infrastructure Grant:** Team at Ohio Department of Job and Family Services is developing grant protocol- this team will also transition to the DCY.
- **4. Updating Child Care Payment Rates & Step Up to Quality:** Early Childhood Advisory Council (ECAC) is working with the DCY transition team to respond to federal requirement to increase the base payment rate to 50<sup>th</sup> percentile, prompting an update to Step Up to Quality framework.

# Partnering Across Sectors to Advance Early Learning and Lifelong Outcomes

Ignoring the issues facing children ages 0-5 exacerbates the challenges that already exist in K-12

- More can be done to prevent and treat early childhood mental health that will greatly increase the outcomes and lesson the resources needed in K-12
- Increasing access to quality early learning experiences for young children will prepare more children to be successful in K-12
- Increasing access to quality child care relieves parents of undue stress and provides for more family stability





# Thank You.

Learn More at:

Groundworkohio.org/earlylearning





# Member Sharing

What are your top education priorities?

Where could you use feedback from peers?



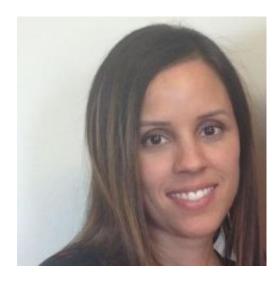
## Reimagining Preschool



Linda Coad
Executive Director of
Special Education
Lorain City Schools



Ross May
Assistant
Superintendent
Lorain City Schools



Alisha Pardon
Assistant Director of
Preschool
Lorain City Schools



## Lorain City Schools

Reimagining Preschool Cohesion August 17, 2023





#### **Introductions**

- Alisha Pardon
  - Associate Director of Preschool
- Linda Coad
  - Executive Director of Student Services
- Ross May
  - Assistant Superintendent
- Jeff Graham
  - Superintendent





#### Who we are

- 10 sites all 5-star rated
- Projected enrollment this school year of 420 students

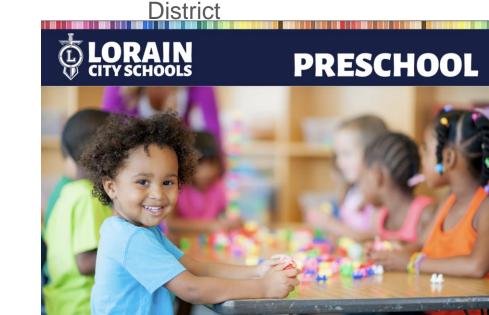
PK

Racial Demographics:

| 0 | Black:           | 16% |
|---|------------------|-----|
| 0 | Hispanic/Latino: | 49% |
| 0 | Multiracial:     | 12% |
| 0 | White:           | 23% |

Disability Demographics:

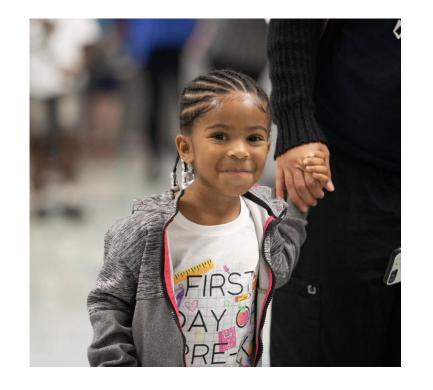
Students w/o a disability: 62%Students w/ a disability: 38%





#### A few of our assets

- Free tuition
- Breakfast and lunch provided
- All-day options and this year, halfday options
- Most teachers have master's degrees
- Many paraprofessionals have Bachelor's degrees
- All staff have been recently trained in the science of reading
- Monthly field trips







## Kindergarten readiness data

- Kindergarten Readiness Assessment "On-Track" in literacy
  - o 2021-2022: 15.7% of students
  - o 2022-2023: 17.2% of students
- 45% of our kindergarten students last year did NOT participate in any preschool







## Why reimagine preschool? Our goals:

- Increase the number of children participating in high quality preschool:
  - 47% of the 70 preschool providers are Step Up to Quality (SUTQ) rated
     3-5 stars.
- Increase the number of students who are kindergarten ready
- Increase the passage rate on the third grade reading and math assessments as more children participate in high-quality preschool.
- Increase the size of the workforce in Lorain as more children participate in high quality preschool.

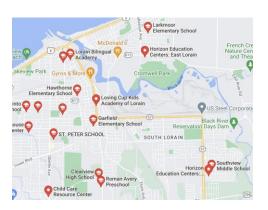




## To achieve our goals, we need to address:

- Physical capacity of our facilities to serve
- Community-wide cohesion
- Ensuring the best practices











## Physical capacity

- 10 neighborhood schools, 20 classrooms
- By adding 3 year olds this year, increase enrollment to 420 students

#### One problem:

We have had a waiting list of 4-year olds each of the past two years

#### The other BIG problem:

 We believe there are approximately 1,500 children NOT participating in any preschool/daycare across the city





## Community cohesion

How do we provide high-quality access for 1,500 additional children?

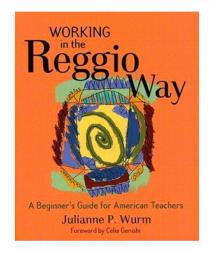
- 70 registered preschools/daycares in Lorain
- 22 are interested in actively collaborating
- Range of practices from SUTQ rated preschools to children in pack-and-plays watching Stranger Things
- Community Preschool Support Specialist
- Partnering with the Lorain Public Library
- Looking for more partners





## Ensuring best practices

- Need consistent and cohesive best-practices for child-development
- Collectively learning "Working in the Reggio Way"
- Partnering with Kent State University's Child Development Center
- Created a preschool coach position









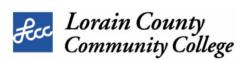
## Support for our proposal

- Mayor Bradley
- Child Care Resource Center
- Lorain Family-First Council
- Lorain County Community College
- Lorain County Public Health
- Lorain Public Library
- Community Foundations

















## Research to support our reimagination

- Several studies indicate high-quality preschool results in better social and academic preparedness for kindergarten AND carries through third grade
- Locally, the Ohio Education Research Center found variables with biggest impact on kindergarten readiness AND third grade state reading test:
  - Newborn home visit
  - Participation in Cleveland Metropolitan's preschool or a high-quality universal center
- Economically, a 2018 study found in two years of universal preschool in Washington DC, maternal workforce participation increased by 12 percentage points, 10 percentage points attributable to preschool expansion





### Yesterday's Cleveland Plain Dealer:

## Cost of child care keeping parents from full-time work

New poll reveals what Ohioans are thinking about current child care costs.

Zachary Smith - zsmith@cleveland.com

More than half of Ohio parents who are not full-time working parents say they would return to work full time if their children had access to quality child care at an affordable price, finds a new poll of Ohioans from the First Five Years Fund.





## Financial playing field

Multiple funding sources exist currently

- Ohio Department of Jobs and Family Services (ODJFS)
- Early Childhood Education (ECE) grant
- Head Start eligibility
- Lorain City Schools local funds





### Confusing funding gaps and playing fields

- Working less than 20 hours per week no assistance
- ODJFS funds up to 400% of federal poverty level, BUT must be working 20 hours per week and have to justify need for child care
- Head Start qualify for up to 130% of federal poverty level
- ECE funds up to 200% of federal poverty level, up to \$4,250
- Average tuition in Lorain is ~\$11,000 per year

#### Lorain City Schools specifically

We have 200 ECE slots, meaning we use local funds for 220 children





#### Our initial intent:

- In partnership with a fiscal agent, provide scholarships to cover the difference between ODJFS and/or ECE subsidy and \$11,000 for families to enroll their child in a SUTQ 3-5 star center
- Lorain City preschool would remain free and first-come, first-served
- Partner with Child Care Resource Center to support centers to achieve 3-5 stars
- Partner with the Lorain County Health Department for newborn visits
- Partner with Case Western Reserve University to measure kindergarten readiness and workforce participation





## Attendance eligibility

Payments would go from the fiscal agent to the provider on a quarterly schedule

- Students attend with 80% or better daily attendance: provider would receive
   100% of the scholarship amount
- Students attend less than 80%, provider would receive a prorated amount of the scholarship, based on the per diem of the scholarship





## **Questions and Discussion**





#### Our contact information

- Alisha Pardon
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- Linda Coad
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- Ross May
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- Jeff Graham
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## **Opportunities to Re-Shift**



Michele Henes
Director Children's Learning Center,
Lorain County Community College
Commodore Kids Programs Professor

# Tinker Train Early Childhood STEAM Project

Stocker Family Foundation
Lorain County Community College Foundation

## Tinker Trailer Concept

- From the STEAM education and the availability of vetted and standardized STEAM criteria for students in grades K-12 has greatly increased since 2011 when then-President Obama called on the nation to ramp up technological innovation to stay competitive with other nations, spur economic growth, preserve national security, and propel
- While STEAM education for students in K-12 has experienced rapid growth, there remains a great need for standardized STEAM curriculum and teaching in the Pre-K population. For this population of students, early exposure to STEAM is even more critical. Brain development through this early exposure is linked with higher ability to understand math later in life.
- We know STEAM education is important. STEM jobs are among the fastest growing segments, offering wages that are more than double the national median (NSF). Additionally, a STEAM education prepares students to be future-ready in this time of rapid change by incorporating iteration and the growth mindset as core principles.
- To prepare our next generation of engineers and inventors, the U.S. and our economy for the future STEAM education for Pre-K must become the norm.
- It must also be made available to all students and educators to ensure that the youngest of children do not miss out on the opportunity for a high-wage future-forward job because of lack of access.
- Additionally, the exercise of ideating and iterating is linked with higher learning and subsequently, literacy. "Literacy occurs through the process of learning (i.e., deliberate procedure of gaining knowledge) and acquisition (i.e., gaining knowledge through observation, exposure to modelling, imitation, and trial-and-error." (Long and Davis, 2017).

## **Grant Highlights**

- That is why LCCC, with the support of the Stocker Foundation, the Fab Foundation and its local partners, seeks to develop and validate a model to educate our youngest students and ensure they are future-ready.
- Specifically, we proposed:
  - ▶ Building a mobile Fab Lab Cart the "Tinker Trailer" capable of delivering age-appropriate STEAM education at any location
  - ► The Tinker Trailer will be a modified version of LCCC's Fab Lab Cab, a novel all-in-one portable Fab Lab that can be transported to any location and powered via a regular wall outlet
  - In addition to the Tinker Trailer, five clamshell cabinets will be developed for each of the five topics Science, Technology, Engineering, Arts, and Manufacturing. The clamshells can be "checked out" with the Tinker Trailer and will house all materials, lessons plans and the one page student take home parent engagement module on the selected topic
  - Developing, implementing, evaluating and publicizing through the Fab Foundation's SCOPES DF open-access resource website a standard Pre-K STEAM curriculum for students with a corresponding family engagement module to enhance the classroom learning experience.
  - Developing, implementing, evaluating and publicizing through the Fab Foundation's SCOPES DF open-access resource website a teacher curriculum/guide to accompany the student and family learning modules.
  - Designing a series of "Family Engagement Nights" through which Pre-K children and their families can grow and continue to explore STEAM.

## Design Process

- Established Tinker Project team
- Research and discussion
- Community Partner Meeting

  - Program information sharingHow long the program has been in existence
  - ▶ Age range of participating children and if you include children ages 3-5
  - Type of experiences provided

  - Technology and resources you have or can access
     Needs of your program for technology and resources
- Design Change
  - ► Tinker Trailer design morph into the Tinker Train

## Tinker Trailer Concept Redesign

#### Create Curriculum Units

- Create 4-6 units of STEM learning experiences including cross-curricular interdisciplinary content connections.
- ► Each unit consists of at least 3 hands on STEM activities that introduce learners to Digital Fabrication, content connections through digital extensions and worksheets, career connections, Social-Emotional Learning 4C's, 'Think like a Coder' activity, "Little Problem Solver' activity, and STEAM Art project.

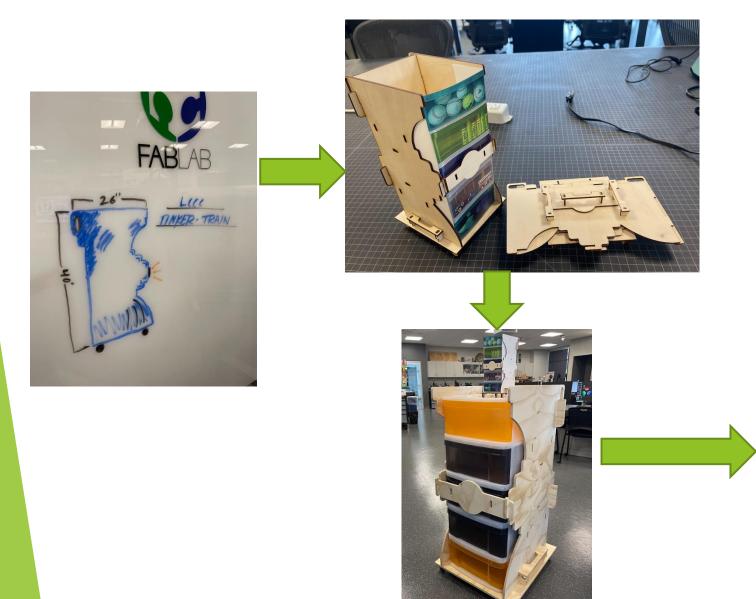
#### Integrated Digital Fabrication

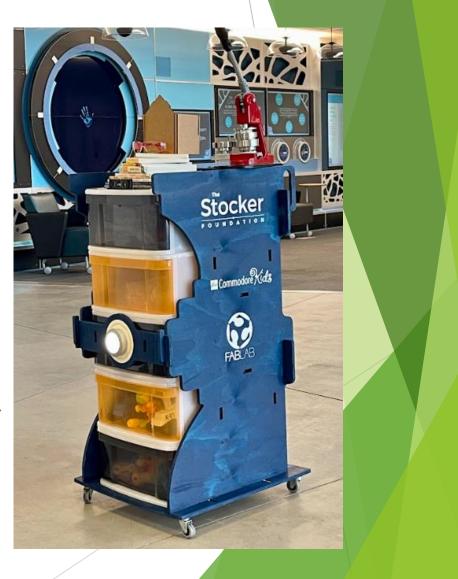
- Consult with the FAB team to create digitally fabricated learning manipulatives for all units
- Create purchase lists for each unit consisting of all materials needed

#### Professional Development

- Work with early education leadership to develop professional development training for teachers on how to use the Tinker Train units
- Consult with Fab Team to create hardware training
- Provide ongoing support to teachers engaged with the units

## Concept to Design





## Tinker Train Unit Topics

- Completed Units
  - ▶ Unit 1 Deconstruction
  - ▶ Unit 2 Construction
- In Progress
  - Unit 3 Weather
  - Unit 4 Sound
- Future
  - ▶ Unit 5 Animal Habitats
  - Unit 6 Electronics, Robotics and Coding

## Curriculum Unit Design

- Each unit contains:
  - Description and timeline
  - Overview
  - Objectives
  - Interdisciplinary STEAM lesson approach
  - Vocabulary
  - Materials List
  - Explore experiences
  - Experience Activities

- Excel
- ► Tinker Tracker
- Extensions
- Career Connections
- **SEL**
- Think Like a Coder Game
- Little ProblemSolvers
- STEAM
- ► PBS Design Games
- Other

## Tinker Train Curriculum Content Examples









## Tinker Train Deconstruction



#### DESCRIPTION

Grade Level: Pre K-2

Timing: 3-10 hours (can be done as a full day activity, or spread out over a week)

Overview: Students will explore what deconstruction means by taking apart a variety of objects and putting some back together. By working in groups they will need to collaborate to create new things and solve problems while using tools that require fine motor skills and attention to safety for themselves and others.

#### **OBJECTIVES**

- · To learn the names and uses of basic tools
- · To use these basic tools safely and correctly
- · To explore how everyday objects are constructed by taking them apart
- To use problem solving and recall to take an object apart and put it back together
- . To use collaboration while working together through a series of handson activities
- · To express creativity by creating something new from existing parts

#### INTERDISCIPLINARY STEAM LESSON APPROACH

These lessons are designed for students to learn about a variety of topics while focusing on a larger overarching theme. Each unit, while not directly addressing specific learning objectives, provides ample opportunity for students to engage with a large number of standards across multiple disciplines embedded in an engaging real world learning experience. Throughout the unit there are many projects designed for interdisciplinary learning as well as more targeted learning activities. Educators are encouraged to expand on this unit plan with supplemental core content instruction and tasks.

Please see the list of content standards addressed in this unit at the end of this document.

#### VOCABULARY

- Construction- the building of something
- Deconstruction- the act of taking something apart that is made of multiple individual pieces
- Tools- a device designed to complete a specific task
- Safety- practices that reduce risk or injury

#### MATERIALS NEEDED

- IN TINKER TRAIN
  - Tools and tool cards
  - Breakerspace objects
  - o Takeapart toys / robots
  - o Plastic bags and trays
  - Unit 1 books
  - Worksheets and Game Cards
- Not included
  - Access to the internet / youtube / video projection
  - o Chart paper
  - Drawing paper
  - Markers / crayons
  - o Tape
  - Scissors
  - o Paint (extension)

#### EXPLORE

#### Introduction (10-15 minutes)

Prep: none

Materials Needed: clock (preferably the one in your classroom)

#### Activities:

- Choose one of the Tinker Train books to read to start the unit, Demolition is a great one!
- Ask students what they know about demolition, what does it mean? Who does it? etc.
- Have students sit on the carpet while you take the clock off the wall in your classroom
- Ask students What is this, what does it do, who made it, how does it work, what can we learn from it, how do we know how it works, what's inside of it, etc.-Get to the idea that we can learn from taking things apart
- You can also bring in different types of clocks to pass around and have students explore

#### Tinker Train Tracker

#### Create a Button

- Print out sheets of the Tinker Train
   Tracker for this unit, enough so each student has one and cut out the circles.
- Have students color one circle each and add their name
- Use the Button Maker to create a button for this unit.



#### **EXTENSIONS**

#### Content Connections

- Give students time to look through all of the Tinker Train books, read some or all of them.
- Generation Genius What is Engineering Unit
  - Video
  - Lesson plan with activities, reading materials, vocab
- Math Counts- Counting worksheets
  - Count by 1s 1-20
  - Count by 2s 2-40
  - Count by 5s 5-100
- Live Worksheets
  - o Construction Zone Pattern patterns
  - o Name the Vehicle-drop down ID





#### Career Connections

KID Career Inspiration: <u>Architect (1 minute)</u>, <u>Carpenter (1 minute)</u>



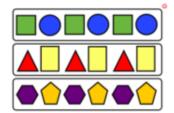
- Discuss historians, anthropologists, archeologists
- · Have a Architect or Engineer day
  - o Encourage students to dress up and take pictures
  - Ask families if they know an architect or engineer who would be willing to zoom with your class.

#### SEL

- The 4c's
  - COLLABORATION and COMMUNICATION
    - students will be working in pairs or a small group for most of the activities in this unit. Be thoughtful about how you partner your students.
    - Discuss with students what makes a good partner and what kind of words good partners use when working together
  - o CRITICAL THINKING
    - Students will need to think critically to build bridges and other items and improve their designs.
  - CREATIVITY
    - Students will need to be creative to create their own buildings in activity
       4 as well as how to improve designs along the way.

#### Think Like a Coder Game

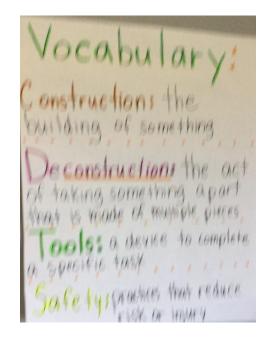
- Code Breaker PBS Game (grades 1-3)
- City Planner Pattern Game

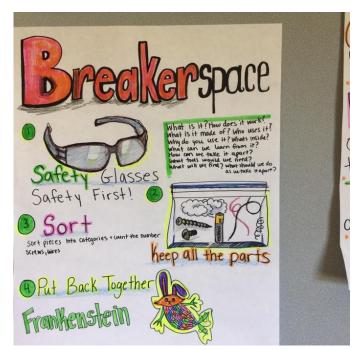














# Questions?





## **Upcoming Education Initiative Meetings**

• Tuesday, October 10, 12:30 – 2 p.m. at Philanthropy Forward '23 (in-person, Columbus)

Wednesday, December 6, 1 − 3:30 p.m. (virtual)



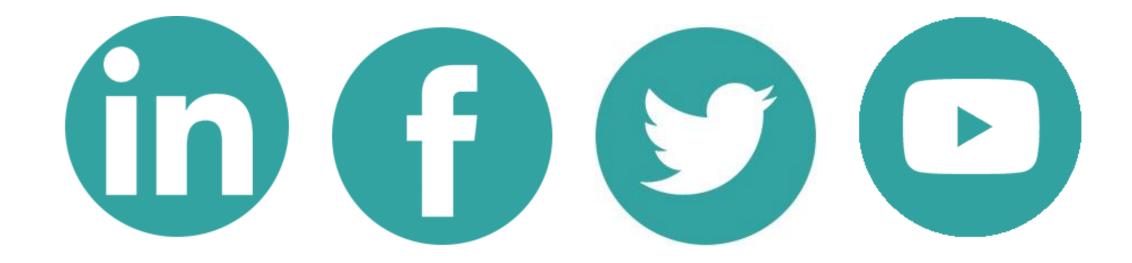
# Interested in Joining the Education Initiative?

Contact Adrienne Wells at awells@philanthropyohio.org

Or visit our website for more information www.philanthropyohio.org



## Connect with us!







## Thank you!