

**LEARN TOGETHER: CONNECTING CHILDREN'S MEDIA AND
LEARNING ENVIRONMENTS TO BUILD KEY SKILLS FOR SUCCESS**

A Ready To Learn Grant Proposal from CPB and PBS

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A. Introduction

CPB and PBS (collectively, the “Project Team”) seek a grant of \$105,109,615 from the Department of Education’s Ready To Learn program to fund a comprehensive, transmedia learning and engagement initiative called *Learn Together: Connecting Children’s Media and Learning Environments to Build Key Skills for Success*. The Project Team will produce dynamic, new learning experiences that **expose young children to career and workforce options**; help them to build vital **functional literacy, critical thinking, collaboration, and “World of Work” skills and knowledge (“Key Skills”)**; and empower and equip parents, caregivers, and communities to support children’s learning and growth in these areas. Ultimately, this combination of approaches – which integrates and addresses both invitational priorities – will put children on the path to success in learning, in work, and in life. This five-year project includes the following major deliverables:

- Three new multi-platform (transmedia) television series and connected digital experiences that build knowledge and support the development of the Project’s **Key Skills** in children ages two to eight.
- Four new short-form video series that support the same **Key Skills**, including a collection of videos that highlight real people and PBS KIDS characters in various jobs and careers.
- Innovative new media, including two new podcast series for children and families, and experimentation with new digital experiences and learning technologies that will increase reach, engagement, and accessibility of the content.
- Digital and real-world hybrid learning experiences that engage children and families around the theme, “Learn Together,” and support intergenerational and family learning at home, in virtual spaces, and in the community.

Content and programs will be created to meet the needs of all of America's children, especially those from under-served, low-income families; will emphasize parent engagement and intergenerational learning; and will create bridges between children's digital play and offline activities. Building on significant experience implementing Ready To Learn programming over the past 25 years, the project also highlights the importance of meeting children and parents/caregivers "where they are" across multiple platforms and physical spaces to support anytime, anywhere learning, including through innovative avenues of distribution, access, and reach. Critical strategic partners include the National Association for the Education of Young Children, The U.S. Chamber of Commerce Foundation, and Parents As Teachers, as well as the 330+ public media stations in diverse communities across the country.

A robust research agenda led by the Education Development Center (EDC) will assess the extent to which the Project moves the needle for children and families, including in terms of building the four Key Skills and inspiring children to explore the World of Work, and will provide new insights into the ways in which newer media and intergenerational media engagement can support children's learning. Data analytics will advance understanding of how game mechanics can influence learning gains, and formative studies will drive informed iteration during content production.

The *Learn Together* Project has been developed at an unprecedented moment in time, as the COVID-19 pandemic causes massive disruptions in American education. It is unclear when many schools and childcare centers may reopen and what the new learning environment will look like. CPB and PBS recognize the adversity that children, families, and educators are facing, and the barriers to (and opportunities for) learning that the pandemic has created. Funding for *Learn Together* will fuel the development of critical learning resources and affect models that fill an urgent need during this uncertain time, while also paving the way for new experiences that bolster children's learning as the post-COVID educational environment unfolds.

Equipping Young Learners with Key Skills for Success

Today's children face a future filled with unprecedented uncertainty. A rapidly evolving global economy and seemingly limitless technological innovations have been changing the way people live, work, and play for years. Many have referred to a Fourth Industrial Revolution, where increasingly automated, global, and tech-driven needs will alter the World of Work in ways that barely can be imagined. The unexpected impacts of COVID-19 are certain to exacerbate these disruptions, making the future workforce landscape even more unpredictable. It is more urgent than ever to equip children with the skills and dispositions that will allow them to successfully navigate the future workforce, regardless of the shape that workforce takes. Based on a careful review of the most frequently cited skills needed for success across a wide variety of careers and contexts, combined with thoughtful consideration of how public media can best promote, model, and measure these competencies, the Project Team will focus content and community programs on the following specific, developmentally appropriate Key Skills and learning outcomes:

- **functional literacy**, focused on use and comprehension of a variety of texts (including informational texts) and oral, written, and social communication skills (pragmatic language development);
- **critical thinking**, focused on computational thinking, creative problem solving, and flexible thinking;
- **collaboration**, focused on social awareness and relationship skills including perspective taking;
- **World of Work skills**, focused on self-confidence, goal-oriented behavior, and task persistence; and **World of Work knowledge**, including exposure to a variety of careers and jobs.

Together with foundational literacy skills, these cognitive and non-cognitive competencies (sometimes referred to as “soft skills”), are known to be important predictors of success in later life, resulting in healthy behaviors, higher income, and employment; in some cases, they are even more highly correlated with successful life and career outcomes than academic knowledge. Moreover, functional literacy, critical thinking, collaboration, and the skills that the Project Team defines as “World of Work skills” are some of those most highly desired by employers, and among those most frequently cited as critical for success in today’s workplace (Education Week, 2020). A 2016 Pew Research Center study found that industry leaders believe that these “tough-to-teach intangible skills, capabilities and attributes” will also be most highly valued in tomorrow’s workforce, noting that these are unique human skills that artificial intelligence machines cannot replicate. And yet, employers are overwhelmingly concerned that young people are sorely lacking in soft skills generally, especially in the four Key Skills identified above, with only 11% of business leaders believing that students are graduating with the competencies their businesses need (Lumina Foundation & Gallup, 2014).

The foundation for skill building in these areas is set during a child’s early years, and trusted institutions such as the National Association for the Education of Young Children, the Urban Child Institute, and the U.S. Department of Education all provide recommendations on how to foster them in preschool and other early learning settings. At the same time, decades of research around the Project Team’s previous RTL work has demonstrated that intentionally designed **media and connected resources** can lead to learning gains in these areas. Study after study of PBS KIDS properties, including *Daniel Tiger’s Neighborhood*, *Sesame Street*, *Curious George*, *Molly of Denali*, and others, show that public media content not only helps children build age-appropriate academic knowledge, but also develop the foundation for the same types of skills employers ultimately seek (Rasmussen et al 2016; Linebarger 2014; McCarthy 2014). In fact, promoting and supporting these

foundational skills is at the heart of all PBS KIDS work, dating to the inception of *Mister Rogers'* *Neighborhood* and *Sesame Street* in the late 1960s.

Opening Up the World of Work

Many career and early learning experts take a developmental approach to advise how young learners can best be supported when it comes to career and workforce exploration. Studies show that children begin making choices that influence their future career goals as early as elementary school, and that these years are critical for shaping career aspirations and beliefs. Havighurst (1964) proposed six stages of career development, the first and most critical of which is *identification with a worker*, occurring between the ages of five and ten, when a child begins to explore the World of Work, to build a cognitive mindset about how the World of Work operates, and to understand the ways in which various skills and talents are connected to it. As they begin to identify their own abilities, attitudes, interests, needs, and talents, children ultimately start to consider how they might fit into this world (Parsons, 1909), and by 9 or 10, they can express their career interests and goals (Seligman and Weinstock, 1991).

Environmental and personal factors, including race, gender, and cultural or economic situations, play an important role in the career development process – and may strengthen or impede the connections between career interests, goals, and actions (Lent et al, 2000). For children from economically disadvantaged backgrounds, a lack of information or exposure to jobs and career prosperity may limit the ability to envision career attainment (Weinger, 1998). The idea of career success may be illusory, and career development may never be considered a priority (Gorski, 2013). For these populations especially, stimulating interest and aspiration during the early years is critical (Bradley et al, 2001).

Bandura's research points to evidence that children emulate what they see, and that television influences what they do and how they think of themselves (Bandura et al, 2001). More recent, large-

scale global studies confirm that TV and media play a critical role in shaping children's career aspirations from an early age (Chambers et al, 2018). Because children have fully formed gender-and race-based occupational schemas by age 6 (Bigler, Averhart, & Liben, 2003; Liben, Bigler, & Krogh, 2001), positive career and workforce representation that celebrates diversity and an array of opportunities is crucial. Content produced under the *Learn Together* Project will harness the significant opportunity for children's media to drive interest in jobs and careers, to model possibilities, and to visualize success, especially among those from underserved or low-income families: "If I can see it, I can be it." For young learners, the goal is not to focus on career choice, but to open up an expanded range of opportunities so that they build an identity that says, "I can see myself as a meaningful contributor within the World of Work" (Perry & Vance, 2010; Solberg, 2019).

C. Alignment with Invitational Priorities

The *Learn Together* Project responds to **both** Invitational Priorities in an integrated fashion. The content and community programs will expose young learners to workforce options and skills that will prepare them for future careers (Invitational Priority #2) and take this directive a critical step further and use evidence-based approaches to build these skills in young children. The Project Team recognizes that literacy beyond basic vocabulary and reading (Invitational Priority #1) is crucial to workforce success, and therefore functional literacy is included as one of the four Key Skills that will be *modeled* and *measured* throughout the project.

The Project's primary long-term goal, and its critical strategic impact, is to equip young children with key skills and dispositions that lead to success in learning, work, and life. The Project Team proposes five strategic activities, and a series of six intended outcomes, to deliver on this overarching

objective. A robust research agenda will measure each outcome listed below. Please see the **Logic Model** in Appendix D.

Strategic Activities:

In partnership with early education and child development experts, local and national organizations, experienced content producers, noted research and evaluation partners, and other expert advisors, the Project Team will:

1. Create dynamic new transmedia experiences for children ages 2 to 8 that:
 - a. expose young learners to a range of career and workforce opportunities in ways that inspire them to explore the World of Work, and
 - b. introduce, model, and promote the development of four Key Skills that will lead to success in learning, work and life, specifically: Functional Literacy, Critical Thinking, Collaboration, and World of Work Skills and Knowledge.
2. Innovate on new media platforms that hold promise for extending the reach and impact of quality learning content, and open up new avenues of accessibility.
3. Build new engagement models and resources that empower adults and communities to support early learning, with an emphasis on intergenerational learning.
4. Amplify reach and scale through distribution channels that meet children and families everywhere they are, and marketing and communication strategies that drive engagement.
5. Conduct research that informs content creation, measures efficacy, and contributes knowledge to the field about how children learn from media and connected programs.

Short and Mid-Term Goals and Outcomes:

As a result of engaging with the Project's content and programs, young learners – especially those who are underserved or from low-income families – will begin to:

1. develop increased Functional Literacy, Critical Thinking, Collaboration, and World of Work Skills and Knowledge;
2. explore the World of Work, the way it is organized, and the opportunities it presents; and
3. build an identity that enables them to connect their interests and talents to the World of Work, and to see themselves as meaningful future contributors.

Families and communities will:

1. become empowered with knowledge and skills to support children's growth, learning, and development, specifically around development of the Project's four **Key Skills**.
2. be equipped with the tools and resources to support children's learning anytime, anywhere, and develop the confidence and capacity to use those tools effectively.
3. contribute to increased learning gains in children as the result of intergenerational learning experiences.

“Learn Together” Impact Strategy and Theory of Change: The *Learn Together* Project is driven by evidence-based best practices for children's learning through media, and built around a theory of change positing that children's success is amplified when they a) interact with character-driven content that is connected across media platforms, and b) are surrounded by engaged, supported, and caring adults who are connected across home and community environments. To this end, the Project Team has developed a purposeful, holistic impact strategy for the Project, fully aligned with the RTL goals, which connects media across platforms and learning across environments. Centered on the theme, “Learn Together,” the strategy combines content, community engagement, and innovation, while emphasizing the power of intergenerational learning and the importance of building bridges between real-world and digital play.

Studies show that when parents are engaged in a child's learning, “students achieve more, regardless of socioeconomic status, ethnic/racial background, or parents' educational level”

(Antunez, 2000). Parent involvement is also linked to better attitudes toward school, lower dropout rates, increased community support for education, and many other positive outcomes for students, families, and schools (Henderson & Mapp, 2002). And yet, many parents and guardians report feeling ill-equipped to support their children's early learning at home, and caregivers frequently lack the resources and training to be effective educators. To support these key players in a child's life, targeted "Learn Together" strategies will connect the new RTL children's content with contextualizing resources for adults and responsive community programming. A key Project element is an intentional focus on the power of intergenerational learning experiences – from modeling problem-solving within character families in the broadcast and short-form series to promoting shared family playtime through digital games and hands-on community programs. The Project Team knows that guided parent/child playing together leads to important learning gains (Weisberg et al, 2016; Hirsch-Pasek & Golinkoff, 2011), and that this combination of high-tech and high-touch approaches will help to ensure the best possible outcomes for all of America's children.

PBS' more than 330 member stations and their community partners are critical and strategic collaborators in the Project's "Learn Together" impact strategy. With deep knowledge of authentic community needs and proven reputations for supporting children, families, and educators, stations serve as local thought leaders, strategic community partners, and places to learn, connect, and share. Station-led programs are especially critical for underserved children and families, who benefit tremendously from the direct support they receive.

The Unparalleled Impact of CPB and PBS KIDS on America's Children

For more than 50 years, CPB and PBS KIDS have stood as national leaders in the creation of powerful media and learning experiences that move the needle for all of America's children, and especially those who face educational disadvantages. As funders, partners, and community experts, CPB makes PBS' children's television and community impacts possible. Across all platforms, PBS

KIDS resources consistently push the envelope in innovation – taking the best of media, gameplay, and real-world activities and carefully connecting content across platforms and learning environments to deliver significant outcomes for children. Study after study proves that PBS KIDS content produces extraordinary results that help to narrow the learning gap between children from low-income families and their more advantaged peers (Penuel et al, 2009). PBS stations reach more preschool-age children, including more Hispanic, African American, Asian American, and Native American children, and more children from low-income households, than any children's TV network.¹ Over the course of a year, that means that more than 18 million children² interact with PBS KIDS' award-winning content on broadcast alone. For many children, PBS is their only access to high-quality early learning opportunities designed to promote academic and social success. As school closures due to COVID-19 further widen educational inequality among students, PBS KIDS' content and learning resources are more important than ever.

In the months after the pandemic triggered nationwide stay-at-home orders, parents and educators have turned to PBS and local stations in record numbers for at-home learning support, lesson plans, and media collections that align with state and district standards. Local public media stations are filling critical early learning needs virtually and on-the-ground, connecting communities to content online and on-air. In the first eight weeks of the shutdown, PBS TV stations reached over 23 million children and parents during at-home learning hours; more than 21 million children, parents and educators engaged with digital content; and traffic to PBS education websites increased 400%.³ It speaks volumes that, when schools closed their doors and the nation struggled to fill urgent educational needs, Americans turned to PBS – and PBS delivered as no other media provider or learning organization could do.

¹ Source: Nielsen NPOWER, 9/24/2018 - 9/22/2019, L+7 M-Su 6A-6A TP reach, K2-5, 50% unif., 1+min., K2-5 Hispanic, Black, Asian/Pacific Islander, American/Alaskan Native, K2-5 in HH w/Inc<\$25K, All PBS Stations, children's cable TV networks

² Source: Nielsen NPOWER, 9/24/2018 - 9/22/2019, L+7 M-Su 6A-6A TP reach, All PBS Stations, 50% unif., 1+min.)

³ Nielsen NPOWER L+SD, 3/16-5/10/20, M-F 6AM-6PM, 75% unif, 1+ min., K2-18, A25-54 HOH/Partner/Spouse in HH w/Child. Google Analytics March '19 – May '19, February '20 – May '20; AppFigures March '19 – May '19, February '20 – May '20 for pbskids.org, PBS KIDS Games and Video app and PBS KIDS owned OTT apps

NEW CONTENT PRODUCTION

The Project Team will develop and produce dynamic new transmedia experiences that leverage best practices in children's education and media production and lead to meaningful learning gains. All content will be intentionally designed from the beginning of the production process for access via a wide variety of platforms that meet children wherever they are, leveraging proven strategies for reach, engagement, and impact, while also innovating through non-traditional media formats and advancing knowledge about their promise for learning. Deliverables include:

- a) three new full-length multi-platform television series with connected games, websites, and offline resources;
- b) four new short-form series and companion games and websites;
- c) two new podcasts designed for parents and kids to listen and learn together; and
- d) a series of digital experiments – based on series content – that show promise for learning, including multiplayer games designed for children and parents to play together, and experimentation with conversational interfaces (like Amazon's Alexa), to make gameplay accessible to more children.

In keeping with the Project goals, the content will expose young learners to career and workforce opportunities in ways that inspire them to explore the World of Work and see themselves as future contributors; and promote the development of Critical Thinking, Collaboration, Functional Literacy, and World of Work Skills and Knowledge. In a variety of ways and across a number of platforms, these Key Skills will be *modeled* and *measured* as part of the Project's comprehensive approach to achieving the Department's goals. A full discussion of these skills can be found below.

All new content will do what PBS KIDS does best: celebrate a child's natural curiosity, using smart, funny, character-based narratives to model an enthusiasm for learning and exploring the world. PBS KIDS characters are complex, compelling, imperfect, and playful; they are passionate, have grand aspirations and a point of view; and they represent the diverse experiences, abilities, and cultural backgrounds that make up the American public.

Broadcast series						Short form series			Podcasts		
	WOMBATS!		LIZA LOOPS	RFP for Literacy Series	MOLLY OF DENALI	PBS KIDS Career Role Models	Video+Game Experiment	Podcast 1	Podcast 2		
Age	3-5	4-8	3-5	4-8	2-8	4-7	4-8 (+families)	TBD			
Invitational Priority	Priority 2 Career Exposure & Skills	Priority 2 Career Exposure & Skills	Priority 1 Literacy	Priority 1 Literacy	Priority 2 Career Exposure & Skills	Priority 2 Career Exposure & Skills	Priority 2 Career Exposure & Skills	TBD (Related to New Series)			
Learning Focus	Critical/ Computational Thinking, Flexible Thinking, Task Persistence, Collaboration	Critical/ Computational Thinking, Collaboration, Communication, Exposure to Careers	Functional Literacy, Language in Context, Reading Comprehension	Functional Literacy, Informational Texts	Exposure to Careers	Creative Problem Solving	Exposure to Careers (Intergenerational Learning)	TBD (Intergenerational Learning)			

Transmedia Deliverables: Three New Multi-Platform Series

Three new multi-platform transmedia series will model and promote the Key Skills for Success and open up the World of Work for young learners. Each of the three series will include 40 TV episodes, five to six engaging and re-playable digital games, offline activities and printables, and a suite of contextual resources and supporting content for parents, caregivers, and educators.

TV Broadcast Series #1: "Wombats!" (working title). This funny, messy, relatable preschool



adventure features three marsupial siblings, their grandmother, and the diverse animal community that they call home. Grounded and systematic thinker Ozzy, optimistic and exuberant Willa, and precocious Bo are spending the summer in the Treeborhood, their grandmother's impossibly expansive, fantastical treehouse apartment complex that has everything from secret passageways and rope swings to a quirky community of animal neighbors: flamingoes, snakes, elephants, and crabs. As they get to know their neighbors, the Wombats learn that everyone plays a part in how their Treeborhood functions and thrives. Each day

drops a new challenge into their laps (or pouches!), requiring them to fix, find, sort, debug, order – then reorder, create, test, and RE-create when things don’t go according to plan, which happens all too often when you’re three wombat siblings prone to preschool-friendly mayhem. But thanks to their creativity and collaborative spirit, their sense of family, and the role they play within the larger Treeborhood community – as newcomers, problem-solvers, friends, and neighbors – the Wombats always win the day. *Wombats!* is a production of WGBH, producers of RTL-funded *Molly of Denali* and *Martha Speaks*, NSF-funded *Design Squad*, and other PBS KIDS favorites including *Arthur* and *Pinkalicious*. *The series’ primary curriculum focus is critical / computational thinking, with additional emphasis on collaboration, flexible thinking and task persistence. Please see full description in Appendix E.*

TV Broadcast Series #2: “Liza Loops.” Six-year old Liza Loops is a friendly and sociable city kid, a



character of color, and an aspiring inventor. One day, she makes an incredible discovery: a fantastical, lovable, fuzzy blue helper-creature named Stu. As Liza’s new sidekick, Stu is capable of doing incredible things, incredibly fast – but only if he is given explicit instructions. Some might say he acts much like a computer program: entirely literally, doing exactly what is asked, nothing more, nothing less. It’s up to Liza to hone her critical thinking, communication, and collaboration skills as she figures out how to work through a problem, break it down, and convey the instructions clearly to Stu – and how to try again when her first attempt inevitably goes wrong. In a neighborhood where people always seem to be chatting about problems at the office, at the library, in the grocery store, even on public transportation, Liza is always eager to invent something that will help them all. *Liza Loops* is created and produced by Dave Peth, Emmy-award winning producer of RTL-funded digital experiences for *Odd Squad* and *Peg + Cat*. *The series’ primary curriculum focus is critical /*

computational thinking, with additional emphasis on collaboration, communication, and World of Work knowledge / career exposure. Please see full description in Appendix E.

TV Broadcast Series #3: Literacy Series. The third broadcast series will be produced in response to an RFP, a process that has previously resulted in such award-winning children's series such as *Molly of Denali*, *Odd Squad*, and *Peg + Cat*, which all rank among PBS KIDS' most successful shows and lead to specific, measurable learning outcomes in their respective curriculum areas. The RFP process allows the Project Team to invite new producer voices to RTL's media collection, adding diverse perspectives and experiences that connect with all of America's children. Groups that are traditionally underrepresented in media, such as individuals with varied abilities, members of racial and ethnic minority communities, creators who have not yet worked with PBS, and industry newcomers will be encouraged to submit proposals. Selected creators will be mentored by PBS staff and more seasoned producers. *The series will support the foundational knowledge, skills, and dispositions necessary for functional literacy development, and will also consider ways to develop competencies for language, speaking and listening (including language in context) and strategies and skills for effective reading comprehension.*

Transmedia Deliverables: Connected Gaming Experiences to Amplify Learning

PBS KIDS producers develop all video and games in tandem, so that characters, content, and learning goals are consistent and connected across video and gaming platforms. All broadcast series and three of the short-form properties developed under the Project will be enhanced by a series of connected multi-level and re-playable games, building on evidence that when children interact with high-quality educational video and connected games, powerful learning gains occur (Schenke et al, 2020; Roberts et al, 2018). A total of 21 games will be created, and all will be built in HTML5 so that they can be easily distributed on pbskids.org and the PBS KIDS Games mobile app, where

children can download games to play without a WiFi connection. Online and on mobile, PBS KIDS games have a combined audience of over 8 million children each month.

Intergenerational Gaming Experiences. As part of the slate of games being produced with each new broadcast property, three will specifically encourage family play. To date, PBS KIDS has built and researched games for children to play while an adult observes and asks questions (e.g., the RTL-funded PBS KIDS for Parents Play & Learn library of apps); two-player or family games that support turn-taking on the same device (e.g., the *Pinkalicious* Family Game); and open-ended digital games that empower kids to make their own digital creations (e.g., RTL-funded “Fish Force” from *Ruff Ruffman*). Now, PBS KIDS will test and build upon these models to develop new multiplayer games that allow children to practice critical thinking, collaboration, and communication skills with their parents and caregivers in real-time or through asynchronous play; and to use open-ended games to apply and demonstrate what they know by developing new game levels and challenges for parents or other family members to explore.

INNOVATION ON NEW PLATFORMS TO EXTEND REACH AND IMPACT

CPB/PBS have a long history of innovations and will continue to break new ground with the series and games listed above. In addition, the Project Team aims to reach the target audience in new and compelling ways with several other innovations that span format, content, and distribution channels, including through short-form series, podcasts, and smart devices, expanding accessibility to further amplify outcomes.

Innovation Deliverables: Four New Short-Form Series

The way children engage with media content is constantly evolving. While half-hour television series remain a cornerstone of children’s viewing habits, especially among underserved audiences, kids increasingly expect to find whatever they want, whenever they want it – on-demand and in bite-sized

portions. This is one reason why YouTube is the fastest-growing platform in the children's media landscape. To this end, PBS KIDS will develop and produce a collection of four short-form video series that keep kids engaged beyond broadcast, reach more children in new ways, introduce new and diverse voices to public media, and allow the Project to be even more comprehensive in its content offerings. Ultimately, by producing shorter content that aligns with the way children consume video on streaming platforms, more children will be connected with new Ready To Learn programming overall. The Team intends to develop the following series:

- a short-form extension of the hit 2015-2020 RTL / PBS KIDS show *Molly of Denali*;
- a *PBS KIDS Career Role Models* collection;
- a video + game hybrid media experiment.

All short-form content will be distributed via television broadcast as interstitial content during programming breaks, as well as on PBS KIDS social media channels, streaming platforms, and the PBS KIDS YouTube channels (see distribution chart on Page 33).

Short-Form Series #1: Molly of Denali: Peabody Award-winning *Molly of Denali* features the



adventures of feisty and resourceful Molly Mabray, a 10-year-old Alaska Native girl. Molly's family runs the Denali Trading Post, a general store, bunkhouse, and transport hub in the fictional village of Qyah, Alaska. The series invites children ages 4-8 on Alaskan adventures with Molly, her dog Suki, and her friends Tooey and Trini, from fishing to building snow forts to delivering a camera to friends on a volcano via dog sled. In every episode, Molly navigates her world and solves problems with an array of literacy resources, including books, online resources, field guides, historical documents, maps, tables, posters, photos, Indigenous knowledge from elders, her very own vlog and more. With an emphasis on family and intergenerational relationships, *Molly* consistently models Alaska Native values, such

as respecting others, sharing what you have, and honoring your elders, while showcasing contemporary aspects of rural life, including strong female role models and how technology aids in communication. As the first nationally distributed children's series to feature Native American lead characters, the series is changing the narrative around inclusion and representation in children's television. *Molly of Denali* is designed to help kids develop functional literacy skills, with an emphasis on interacting with informational texts. Please see full description in Appendix E.

Short-Form Series #2: PBS KIDS Career Role Models: Under the wide-open Arizona sky, a 6-year-old girl stares in awe at the constellations filling the blackness above her. In a bustling downtown apartment building, a 5-year-old boy beats a rhythm on pots and pans in his grandmother's kitchen. In a dusty backyard garage, a brother and sister work together to disassemble an old Chevy. Ten, 15, 20 years from now, these children will grow up to be an astrophysicist, a sous chef, and mechanics. Children need real-life examples of jobs and careers that inspire them to pursue their own passions, and to see how they might turn their life's interest into their life's work. Centered on the idea "If you can see it, you can be it," the *PBS KIDS Career Role Models* video collection will feature real adults in real jobs reflecting on the path they took to get there, including the education and skills that set them up for success...alongside the many grown-up characters from PBS KIDS series who do diverse and interesting things: like Arthur's dad, a caterer; Molly's mom, a bush pilot; Elinor's mom, a park ranger; and the Wombats' grandma, a building superintendent. 13 two-minute live action shorts will build out the small, existing collection (see it at <https://to.pbs.org/rolemodels>) and take it in a fun new direction with the integration of beloved characters who serve as friends and trusted guides on a journey from today's hobby to tomorrow's career.

Short-Form Series #4: Hybrid video + game experiment: An innovative “watch and play” video series with a robust, fully integrated gaming adventure will be produced in response to an RFP. This project, still in the early stages of development, builds on the learnings from PBS KIDS’ Emmy-nominated *Scribbles and Ink*, a ground-breaking digital experience that seamlessly blends game and story together in the same environment, helping to build critical / computational thinking and functional literacy skills.

Innovation Deliverable: Podcasts for Intergenerational Audiences

Two podcasts intentionally designed for children and adults to listen to together will be created under the Project. The first will be an original non-fiction podcast series designed to expose young children to varied careers and workforce options, and the second will be an audio narrative expansion of one of the new broadcast series (TBD). Both will be created in partnership with industry leader, PRX.

Podcasts are a rapidly growing area of children’s media and demonstrate powerful opportunities for engagement and impact. The Kids Listen Inaugural Survey (2017), the first-ever study of children’s podcast listening habits, found that children who listen to podcasts are repeat listeners, with 80% listening to a podcast more than once. They are also deep and thoughtful listeners: likely to quote or re-enact part of a podcast episode, tell others what they’ve learned, ask to listen again, get more information, or request to do an activity inspired by the podcast. In the wake of COVID-19, parents and caregivers are increasingly seeking out new, on-demand free-time options for kids, and PRX has seen an over 50% increase in unique listeners to the PRX kids’ portfolio since March 2020.

For the original series, the Project Team and PRX will issue an open call to seek new voices in children’s media production. Three to five teams will be selected to participate in a 20-week training

program focused on podcast content development, cultivating diverse talent and promoting audience engagement. Each team will produce a podcast pilot episode, which will be published as an anthology on all podcast platforms (leveraging PRX's established partnerships), as well as on PBS KIDS' own distribution platforms. Children and families will participate in an online nomination process to select one of the pilots to be developed into a full series. These finalists will work with the PBS KIDS Digital team to develop interactive elements to allow children and parents to ask questions, submit ideas, and inform the direction of future episodes; and to develop adaptations for broader accessibility, such as transcripts and visual accompaniments for the hearing-impaired. The Project Team is committed to broadening the reach of podcasts to include voices and content that appeal to diverse populations, ensuring that children of all backgrounds feel welcome and represented, and that this promising media format is introduced to children and families who may not have been exposed to podcasts in the past.

Innovation Deliverable: Conversational User Interface

As part of digital content development, PBS KIDS will explore the rapidly growing field of conversational user interfaces (UI), most commonly used on smart speakers or smart screens such as Amazon Echo (“Alexa”) and Google Home (“Google Assistant”). These interfaces are some of the fastest-growing technology in homes with children, and there is considerable opportunity for experimentation, innovation, and research around how conversational UIs can promote learning gains, most notably in the areas of language development and communication skills. PBS KIDS will build prototypes that allow kids to interact with series-based characters directly through game or story scenarios, taking what is currently a primarily smart speaker capability and integrating it into screen-based media. Voice navigation is also a promising feature for expanding accessibility of games to children with visual impairments or limited mobility.

PLANNING FOR NEW CONTENT

Curriculum Focus: Key Skills for Success in Learning, Work and Life

To prepare for the *Learn Together* Project, the Project Team consulted with experts in early childhood development; reviewed skills cited as most highly desired by employers; performed an extensive literature and landscape review of competencies, frameworks, and measurement tools; and assessed how media could best promote skill development in young learners. As a result, they identified four sets of developmentally appropriate Key Skills for success: Critical Thinking, Collaboration, Functional Literacy, and World of Work Skills and Knowledge.

1. **Critical Thinking:** Critical thinking is the ability to ask questions and organize, evaluate and analyze information to make decisions and judgments and solve problems. Creativity is a key component of the critical thinking process and involves using imagination and flexible thinking to find new approaches and solutions to challenges. Fostering **creative problem-solving** as part of critical thinking is a crucial step in learning, and the first step toward innovation. A form of critical thinking, **computational thinking** requires cognitive skills like sequencing and planning and helps young children solve problems that are meaningful to them. The Project content will encourage these skills by providing opportunities for children to think outside the box, make connections, and develop a flexible mindset through play.

2. **Functional Literacy:** Functional literacy, though called out as a separate priority within the solicitation, is a critical component of career readiness. It refers to the reading, writing and communication skills necessary to participate in the activities and functions of everyday life and work, and to use literacy skills within and across contexts. Crouch and Montoya (2017) state that, “Rather than being solely about the ability to understand the written information in front of you, functional literacy is about your ability to use that information as a way to communicate and to express yourself.” The Project will encourage the effective oral and

written **communication** skills that are critical to workplace relationships, as well as **pragmatic language development**: knowing what to express, how to express it, when to express it, and how to express it to others given social contexts. **Reading comprehension** across a variety of contexts, including informational text, will also be emphasized.

3. **Collaboration:** Collaboration skills enable people to work together to achieve a common goal and are fundamental expectations in most workplaces. **Social awareness** (recognizing the similarities and differences of others) as well as **perspective taking** are important aspects of collaboration at all ages, including for children to work and play together. Children can practice collaborative skills through intergenerational and family play in games and through real-world activities; by following rules and procedures of group games and activities; and by recognizing the contributions of all participants, including those from a range of social and cultural backgrounds and intellectual and physical abilities.
4. **World of Work Knowledge & Skills:** The World of Work can be defined as the career and workforce options that are now or will likely be available and in demand when young children of today enter the workforce. Children need to develop **self-awareness** and connect that identity to the possibilities available to them in the wider World of Work. Through the Project's content and community impact programs, children will be exposed to a variety of career and job options; see and ask questions of people in the working world, especially people from populations currently underrepresented in many careers (e.g., people of color and people with disabilities); explore how the World of Work is organized; see how people in the World of Work can help solve problems; and begin to align their interests and strengths to the array of workforce opportunities. The Project will also help to foster the social-emotional and executive function skills that will lead to productive workforce participation, including **goal-setting** and **task persistence**, among other important competencies.

These four sets of Key Skills are cross-cutting, interdisciplinary competencies dependent on broader domains tied to early learning and development, including social-emotional learning (SEL) and executive function: the processes by which children become better able to understand, express, regulate, and manage their emotions; relate to others; and ultimately navigate the demands of the workplace. All children need support in building these skills, but particularly those who are underserved or from low-income families. Experts note that young people who have experienced poverty and other trauma may face particular challenges in developing the executive function skills so critical for workforce success. And yet, studies show that these same skills, along with pro-social mindsets about the value of learning and the ability to succeed, are exactly the ones necessary for underserved and low-income youth to overcome obstacles and close the gap with more advantaged peers (Miyamoto, et al, 2015; Tough, 2012).

Developing New Curricula: The creation of content under this project will be guided by existing PBS KIDS Learning Frameworks, including those for SEL and Literacy-ELA, updated and revised as necessary to support the goals of the 2020-2025 RTL initiative. PBS KIDS Learning Frameworks contain the Big Ideas and learning progressions for foundational concepts, skills, and practices for young learners. They align to research-based national and state standards, including Common Core State Standards, Next Generation Science Standards, and the Head Start Early Learning Outcomes Framework, and take into account policy recommendations from leaders in early childhood education. (As an example, the current PBS KIDS Literacy-ELA Framework can be found in Appendix E.)

Working with Advisors (see page 48), PBS KIDS will develop comprehensive curriculum plans for each property that draw on the existing frameworks, with an emphasis on the four Key Skills. For *Wombats!* and *Liza Loops*, a computational thinking curriculum will be created for children ages 2-8 with a scope and sequence that takes into account the practices, knowledge, skills, and processes

necessary for children to apply computational thinking strategies to solve meaningful problems, progressively across age brackets. A curriculum advisor will work with each producer to ensure that concepts and skills are meaningfully integrated into the story narratives, game play, and other media.

Formative Testing and Data Analytics to Inform Design and Drive Learning Outcomes

Formative testing will inform the production of all broadcast and short-form series, assessing how children respond to the characters and storylines, and their promise for delivering learning outcomes. The PBS KIDS Digital Playtesting Program, which is implemented both within schools and virtually with children in a wide variety of homes, will evaluate usability, appeal, and engagement, and will also allow the Project Team to iterate on the design of all games related to the series. The Project also will make a significant investment in data analytics to compare the effectiveness of various game design approaches, enabling the Project Team to iterate on games post-launch and contribute to the knowledge base of how game mechanics influence learning and engagement. See details in the Research section below and Appendix H.

Commitment to Accessibility and Universal Design for Learning (UDL)

The Project Team is committed to ensuring accessibility for all children, including those with differing abilities. With the 2015-2020 RTL funds, PBS KIDS undertook significant work in the area of accessibility and developed a curriculum-agnostic Universal Design for Learning (UDL) framework (which can be found in Appendix E). With 2020-2025 funding, PBS KIDS will engage experts in accessibility and UDL to update the framework and align it to Project goals. Moreover, a new customizable accessibility panel will be produced and embedded in new PBS KIDS games, enabling players and their caregivers to adjust settings and better personalize play experiences to accommodate differing abilities. On a game-by-game basis, options such as descriptive text, enhanced sound control, and pointer re-sizing can help to enhance accessibility for young learners. Content producers will work with embedded UDL Advisors at the ideation and production stages for

all video and gaming content to ensure application of best practices for inclusion and UDL considerations. All game producers are already required to ensure user interfaces adhere to accessible design best practices, and many PBS KIDS apps feature dual language support for English and Spanish. Closed-captioning is available on all PBS broadcast shows as well as for streaming video, and many programs support descriptive audio. With UDL Advisors, the Project Team will continue to explore opportunities to meet the needs of all learners under the Project, potentially creating sensory-friendly versions of the podcasts and voice-controlled video platforms, and curating content for special populations.

Strategic Activity #3: Empowering Adults & Communities to Support Early Learning

With a focus on reaching families in low-income and under-served communities, the Project Team has developed a comprehensive scaling strategy that combines innovation, access, and equity to engage adults and communities in children's learning, embracing the theme "Learn Together." Through the "Learn Together" impact strategy, those who care for and about young children (primarily parents/caregivers and informal educators) will be empowered by best-in-class content, resources, and community partnerships to support their children's learning and success. The strategy leverages studies that demonstrate that PBS KIDS family and community engagement experiences effectively contribute to children's learning, and increase parent confidence to support and sustain that learning at home (WestEd, 2015; EDC/SRI, 2019). It includes three core components, all of which use human-centered design principles and involve audiences in co-creation:

- **"Learn Together" Resources:** new and comprehensive resources and support materials for adults that leverage the children's video, digital and hands-on learning activities created under the Project to support intergenerational learning and the Project's learning goals.

- **“Learn Together” Hub:** an innovative new digital destination that curates, sequences, and customizes the Project’s children’s media and “Learn Together” supporting resources, for implementation at home and in the community.
- **“Learning Neighborhoods:”** communities where schools, libraries, public media stations, museums, businesses and other stakeholders come together to provide the wraparound supports that enable families and children to engage in experiences that improve early learning.

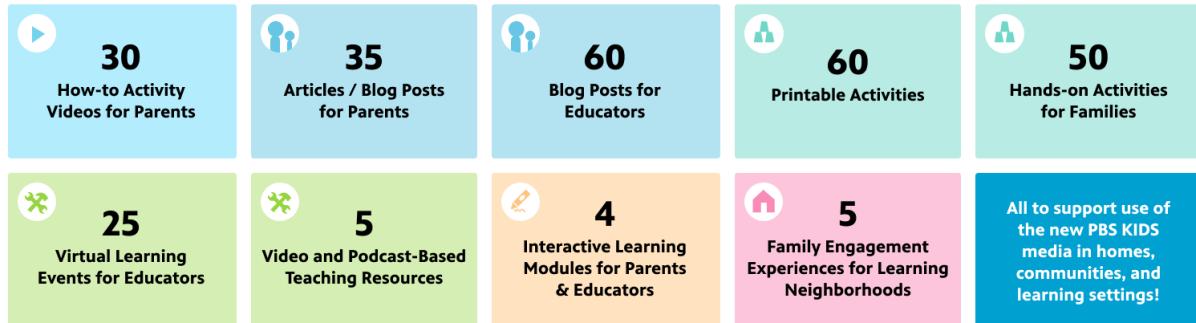
“Learn Together” Resources

To add context to the RTL content created for children, PBS KIDS will also produce adult-facing articles, tips, and videos for parents and caregivers that support anytime, anywhere family-based learning around the Project’s four Key Skills, as well as resources for educators that promote simple and evidence-based practices to support family engagement and bolster learning around the Project goals. These “Learn Together” resources will provide guidance for facilitating children’s engagement with the Project’s games, video, and real-world activities, offering important support for the adults who play critical roles in children’s learning and development. (See chart below).

Resource development for adults will be guided for the duration of the grant by a co-design collaborative of parents, educators, and stations to ensure content, voice, and delivery are responsive to the target audience’s needs and priorities. Content will be developed flexibly, with adaptations as needed for various audiences, including Spanish language content and translation, in order to maximize impact and relevance of each. In addition to connecting to the newly developed broadcast series, (*Wombats!*, *Liza Loops*, the new literacy series), short-form series, and podcasts, “Learn Together” resources will also integrate targeted content from past rounds of RTL that meet the invitational priorities of this solicitation (see a complete list in Appendix E).



"Learn Together" Resources to be Produced under the Project



"Learn Together" Hub

To drive access to and distribution of this content, PBS will develop a "Learn Together Hub" that sequences relevant "Learn Together" resources into bundles for adults to use with children at home or in community settings. This innovative content delivery system will serve up timely, tailored "Learn Together" resources on demand as well as through newsletters, text messages, social media, and/or other communication tools. "Learn Together" resource bundles will come in a variety of sizes to support the Project's learning goals, with a special focus on intergenerational learning, and will be delivered in two ways:

1. PBS will curate, package, and deliver bundles that offer a scope and sequence of content that parents can select according to the age, stage (interests, abilities) of their children.
2. Parents, caregivers, and educators can also customize and curate their own content bundles based on user-selected preferences to support facilitated learning experiences at home or in the community.

All Hub-curated resources will have the ability to be favorited, shared (via Facebook, Instagram and other social media channels), and accessed whenever desired. This means parents and caregivers can create more meaningful, play-based learning opportunities with their children. At the community level, those who facilitate RTL content and programs (including public media stations, community

partners, childcare providers, and more) can tailor resource bundles to local needs, activities, and programs.

The screenshot illustrates the PBS KIDS Learn Together Hub. On the left, a search interface allows users to specify parameters: 'For classroom' (switched to 'For home'), 'How old is your child?' (5 years old), 'What should we learn?' (Literacy), and 'How much time do we have?' (45 minutes). Below these are two children's illustrations. A large blue button labeled 'MAKE MY BUNDLE' is at the bottom right. An arrow points from this interface to the right side, where a 'Your Home Literacy Bundle' is displayed. This bundle is titled '45 minutes for you and your 5 year old' and includes four items: a 'Video' (Molly of Denali By Sled or Snowshoe, 11 MINS), a 'Game' (Liza Loops Inventor's Manual, 9 MINS), an 'Activity' (Molly of Denali Design a Dog Sled, 20 MINS), and an 'Article' (Raising Info-Kids! Using and Creating Informational Texts at Home, 5 MINS, En español). A 'Show me another' button is at the bottom, and a note at the bottom right says 'Looking for literacy professional development?'

The vision for the Hub builds on years of development to deliver packaged and user-designed, sequenced learning activities using the PBS KIDS and PBS KIDS for Parents Digital infrastructure, plus a tool rapidly developed and piloted at the start of the COVID-19 pandemic to deliver bundled resources to families urgently seeking high-quality at-home experiences tailored to the unique interests and abilities of their children. The Hub will be actively promoted to the target audiences through the extensive reach of PBS' digital platforms and products.

Learning Neighborhoods

Community impact work, centered on a locally-responsive Learning Neighborhood model, will bring community stakeholders together to connect and empower adults around early learning and the Project's goals. Child-centered and impact-oriented, Learning Neighborhoods represent a constellation of people, organizations, tools, and resources that surround a child with powerful learning opportunities. The model builds on strategies developed under the 2015-2020 RTL grant,

and results which demonstrated that when a community comes together in deep and meaningful ways to promote children’s learning holistically and across environments, children are better prepared for school, parents build confidence, educators build knowledge, and out-of-school learning improves overall (EDC-SRI, 2019). The work established strong relationships between stations and community partners that will be leveraged for the *Learn Together* Project, and yielded a collection of innovative new resources and activities emphasizing intergenerational learning that will lay the foundation for new “Learn Together” experiences.

In a Learning Neighborhood, children and families will connect to learning opportunities through a variety of interactions in their physical and virtual lives. For example, the Garza family in Austin, Texas, may tune in to PBS KIDS on KLRU daily, where Ana, 4, joins the Wombats on their adventures, and Miguel, 6, solves problems with Liza Loops. On the weekend, the Garzas head to the library, a Learning Neighborhood partner. There, they find a curated set of children’s books about a range of careers, watch the PBS KIDS Career Role Models shorts in the listening corner, and learn that the family can attend an upcoming event at the local Chamber of Commerce, where members of the community in diverse fields will speak about their work. At the library, their father signs up for a text messaging program that alerts him to learning activities they can do at home as a family, and a text later that day points him to an upcoming PBS KIDS Family Creative Learning Workshop they can attend together at the community center. The Workshop is designed to build collaboration and critical thinking skills, and Miguel is especially excited to see that the resources are based on his favorite *Liza Loops* characters. As the Garzas go through their normal routine, they experience the Learning Neighborhood in a variety of ways that support the family as they learn and play together.

Under the Project, Learning Neighborhoods will be established in **40 communities over the course of five years**, bringing together local education stakeholders (public media stations, schools, government agencies, out-of-school-time providers, businesses, human service agencies, arts and cultural centers, libraries, and other community organizations) to engage children and their families

in experiences that prioritize the Project's four Key Skills and harness RTL content to improve early learning. These will include play-based learning events for families, professional development for formal and community educators, workshops for parents, and other programs developed at the community-level in response to local needs. Given the current public health crisis, community activities may initially take place virtually and, when safe, in-person. Ultimately, the Learning Neighborhood model will scale use of the content and resources created under the grant, and encourage sustained use and impact that is both broad and deep.

Activating the First Wave of Learning Neighborhoods: The community impact strategy begins with an immediate and continued assessment of the learning landscape and the needs of Ready To Learn families. During Year 1, the Project Team and EDC will collaborate with 12 representative PBS member stations representing a mix of urban, rural, and suburban communities, along with organizational partners, to assess and understand the evolving needs of parents, caregivers, educators, and communities, including the impact COVID-19 has had on these groups. The Project Team and national/community partners will listen, understand, and map solutions to identified needs; test potential Learning Neighborhood components using existing resources that align with Project goals; and rapidly prototype and test new ways to package and deliver content to best meet the needs of target families. Ultimately, the work will inform the creation of the “Learn Together” adult-facing resources and community programs described above. This design process will not only result in a more authentic and effective model, but in the short term, will also provide content and programs that respond immediately to urgent COVID-19 learning challenges for families. (See detail of the needs assessment in the Research section and Appendix H.)

The 12 stations are: Alabama Public Television, Alaska Public Media, PBS SoCal (California), WFSU (Florida), Kentucky Educational TV, Maryland Public Television, Detroit Public Television, Vegas PBS, WNET (New York), WQED (Pennsylvania), Austin PBS, and PBS Wisconsin. These

PBS stations all have had extensive experience with Ready To Learn in both the 2010-2015 and 2015-20 grant rounds. They are leaders in early childhood, family engagement, community partnerships, teacher professional development, and educational technology and media. Moreover, the states where these stations are based collectively represent more than half of the nation's 13 million children living in poverty (Children's Defense Fund, 2019), and were hit especially hard by the COVID-19 pandemic. (See more detail on these stations in Appendix G).

Leveraging National and Community Partners: Strategic national and local partners are critical to the success of the Project Team's community impact work. Local community partners will co-create resources, and collaboratively develop and implement programs. The national organizations listed below will help to inform and scale delivery of content and engagement experiences to families and local communities. See Letters of Commitment in Appendix C.

The U.S. Chamber of Commerce Foundation (USCCF) Center for Education and Workforce is an affiliate of the U.S. Chamber of Commerce, the world's largest business federation. USCCF is a trusted national voice focused on engaging business, along the entire education and workforce pipeline. USCCF has a proven record of educating and partnering with its federation of more than 2,500 state and local chambers of commerce. USCCF's ability to leverage that network to take action on issues of importance, including early learning, is critical to the success of the Learning Neighborhoods. The USCCF will: 1) provide expertise and thought leadership on education and workforce needs, and how they inform the building blocks of early career readiness; 2) activate local Chamber staff to partner with stations on the Y1 needs assessment and ongoing Learning Neighborhood activities; and 3) support ongoing awareness-building of the Project's content and "Learn Together" resources among working parents and local business communities.

The National Association for the Education of Young Children (NAEYC) is a professional membership organization that promotes high-quality early learning for all young children, birth

through age 8, by connecting early childhood practice, policy, and research. The association comprises nearly 60,000 individual members of the early childhood community and more than 50 affiliates, all committed to delivering on the promise of high-quality early learning. NAEYC will support the Project in five ways: 1) Serve as a project advisor, providing expert guidance to ensure that the Project's goals, content, and engagement experiences are responsive to the needs of families and educators and are aligned to NAEYC standards and resources; 2) Support the needs assessment and landscape analysis to inform Learning Neighborhoods, identifying educators for focus groups and leveraging state affiliates to participate; 3) Co-develop content and resources, including professional development and virtual learning events; 4) Leverage its network and platforms to promote wider use of RTL content with families, in daycare facilities and school-based settings; and 5) Identify five to ten affiliates who will partner with local stations to build relationships with educators and families in Learning Neighborhoods, facilitated by mini-grants that support collaboration.

Parents As Teachers (PAT) is the largest home visiting program in the U.S. Last year, 8,540 Parent Educators engaged with nearly 186,000 families – primarily low-income or otherwise considered high-need – through over 1.8 million home visits nationwide. PAT's evidence-based model – personal visits and mentoring (in-person, virtual, and hybrid), child screening, group connections, and resourcing – works to improve children's school readiness, long-term academic achievement, and health, and reduce instances of child abuse and neglect. Their network and relationships span urban, suburban, rural, and frontier areas, including with school districts, county health departments, pediatric offices, food banks, crisis nurseries, housing authorities, early intervention agencies, and nonprofits that provide parenting support. PAT will: 1) serve as an advisor in the area of parent engagement; 2) leverage their network to support the creation of professional and parent-facing "Learn Together" materials with a focus on parent engagement and

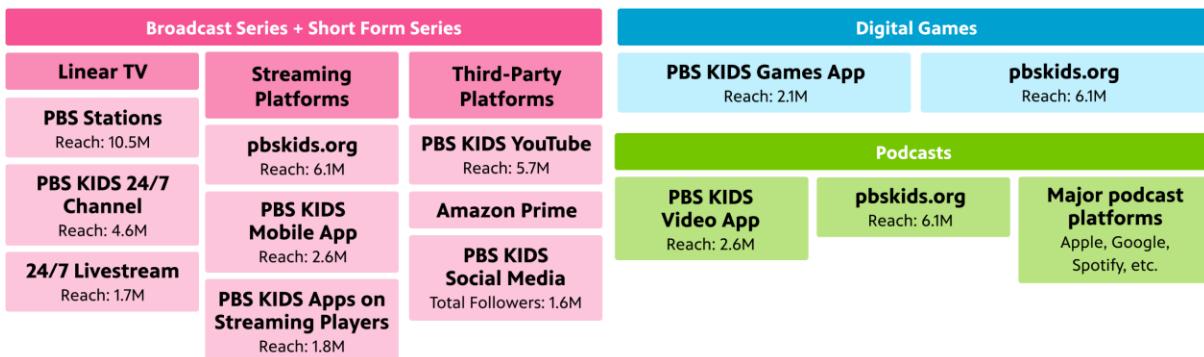
intergenerational learning; and 3) collaborate to implement and distribute these resources at national and regional levels.

Strategic Activity #4: Achieve National Reach and Scale Through Distribution & Marketing

The Project Team is committed to reaching all children and families everywhere they are, and the unparalleled reach of PBS KIDS ensures that the Project content will be accessible to millions of children on broadcast and beyond, free of charge. In addition to tremendous audience reach across PBS' own channels and platforms, the Project Team has developed strong relationships with platform partners including Apple, Google, Amazon, and YouTube Kids to help ensure PBS KIDS series and apps are easy to find and access. Each of the three multi-platform series – *Wombats!*, *Liza Loops*, and the Literacy series – will air daily on local PBS stations and the 24/7 PBS KIDS channel; and will be available to stream on pbskids.org, the PBS KIDS video app (on mobile and on streaming players including Roku, Apple TV, Android TV, Amazon Fire TV, Chromecast, and Smart TVs), the PBS KIDS YouTube Channel, and on Amazon Prime and the PBS KIDS Amazon Subscription Channel. Short-form series will also be available on-air and on all streaming platforms (except Amazon), as well as distributed through PBS KIDS' widely followed social media channels (Facebook, Instagram, Twitter, etc.). These social media channels will also drive audiences to all broadcast series, games, and content for grown-ups. All games will be accessible on pbskids.org and downloadable from the PBS KIDS Games App. The chart below depicts the tremendous reach of PBS KIDS content across all platforms ***every month***.



PBS KIDS Content - Distribution Platforms & Monthly Audience



Sources: Google Analytics May 2019 – April 2020, Nielsen NPOWER L+7, 4/29/19-4/26/20, Avg Mo Reach, PBS Primary MF6A6P K2-11 or A25-54 HOH/Spouse/Partner in HHwC<12, PBS Subs MSu6A6A K2-11

Strategic, multi-platform marketing and communications efforts will build awareness of and engagement with the Project's content among children ages two to eight, their parents, caregivers, and educators, and will be informed by market research with target audiences. Promotion will span all PBS KIDS, PBS KIDS for Parents, and PBS Education channels and social platforms, and also includes a paid media campaign and blogger and influencer engagement. Comprehensive public relations plans will be developed for each broadcast, short form, and podcast property. App store optimization will enhance the visibility of new content within the PBS KIDS Video and Games apps. Localized email marketing will point to "Learn Together" resources and events. Proof-of-performance materials will highlight the research, content and impacts of RTL-funded PBS KIDS content and resources, including through both written collateral and video assets. More details on the RTL Marketing & Awareness-Building Strategy can be found in Appendix I.

Strategic Activity #5: Conduct Research to Inform Content Creation & Measure Outcomes

Working in close collaboration since 2006, CPB, PBS, and Education Development Center (EDC) have produced a substantial body of research that has examined the effectiveness of RTL programming. The Research Team has provided evidence that media can improve young children's learning in literacy (Penuel et. al, 2009), including informational text (Kennedy et al, 2020), mathematics (Pasnik et al, 2015) and science (Grindal et al, 2019) and developed a deeper

understanding of how to help parents engage in learning with their children (Silander et al, 2020). However, there is more to learn about how to most effectively create media experiences for children and their families. Although the effects of RTL-supported media on many foundational literacy skills are relatively well-established (Hurwitz, 2019), less is known about how media can improve young children's functional literacy, critical thinking, collaboration and World of Work skills and knowledge, nor how to best engage families and communities in this effort, and how to do so effectively at scale.

The Project's Research Team, led by EDC with study-specific support from UCLA CRESST, SRI, Rutgers University's School of Communications and Information, and Rockman et al, has developed a research program that will collect qualitative and quantitative data to assess the promise and impact of Project elements. It builds on existing research and includes six areas of study. A detailed research plan is included in Appendix H; a summary follows here:

	Research Activity	Project Elements	Purpose
1	Landscape Analysis	Learning Neighborhood Stations and Community Partners' Efforts	Understand current child, family, and community contexts, including shifts in engagement resulting from COVID-19, to ensure Project is positioned to address authentic needs and goals
Formative Research & Data Analytics			
2	Content Design and Usability Testing	All new PBS KIDS content (broadcast, short-form, games)	Ensure children and families, particularly those in low-income families and with disabilities, are responding appropriately to the media and are learning in the ways that are intended
3	Implementation and Context Studies	Intergenerational Games, Podcasts, Learn Together Hub, Learning Neighborhood Partnerships	Explore diverse child and family engagement with the new media resources, identify support materials, curation and communication approaches that support effective use at scale
4	Data Analytics Studies	Digital Games	Identify which pathways users take through digital media and which game approaches contribute to effective learning
Summative Research			
5	Exploratory + Innovation Studies	 Original Podcast Season 1  Molly Denali Shorts  Literacy Series	Evaluate the promise of podcasts for supporting intergenerational learning; explore how new media approaches support children's understanding of the world of work; evaluate how new literacy properties contribute to functional literacy learning gains
6	Randomized Controlled-Trials	 	Determine whether the media improves children's critical thinking, collaboration, and "world of work" knowledge and skills

1. Landscape Analysis: Understanding the Needs of Children and Families

To ensure that the Project meets the needs of children and families in served neighborhoods and to better understand the changes they have experienced due to COVID-19, EDC will support 12 pilot Learning Neighborhood stations as they conduct broad local needs assessments, providing a toolkit and technical support to guide data collection and analysis. Through focus groups and interviews, EDC will also conduct a deeper study to explore the informal learning contexts of 60 diverse families, focusing on existing supports and challenges related to the Project's goals, and exploring how families' contexts and needs have been altered during 2020. This work will build on existing literature (e.g. Katz, Moran & Gonzalez, 2018; Rideout & Katz, 2016; Silander et al, 2018) to provide a deeper understanding of how low-income families engage in learning together and use media to do so.

Formative Research: Supporting Resource Development

2. Content Design Principles and User Testing: The first formative studies will test newly developed resources to ensure they are usable, comprehensible, and aligned to curricular frameworks. Activities include reviewing and testing pilots (where applicable, based on timing), select episode scripts, game prototypes, videos, and podcasts with small groups of children and families using observations, interviews, and surveys. Research activities also will explore how children with different learning and physical abilities engage with the resources, including accessibility features. Resources for parents, communities, and educators will also be tested.

3. Implementation and Context Studies: Designing for Intergenerational Learning: Following the initial user testing, two implementation studies will explore use of the media with a broader set of children, caregivers and community partners, including 100 children and their families in the first study and 30 families in each of the first 12 Learning Neighborhood sites in the second study. The studies focus on how diverse children and families engage with the resources in the context of their

daily lives and the features of the media, support materials, curation and communication approaches that support effective use of the media at scale. Using interviews, observations, experience-sampling surveys, and pre- and post-surveys with children, families and community members, these descriptive studies will focus on the use of the “Learn Together” Hub, including the intergenerational games and hands-on activities, podcasts, and Learning Neighborhood partnerships.

4. Data Analytics Studies: Improving Learning Outcomes by Optimizing Game Mechanics:

Building on innovative work conducted during the 2015-2020 RTL initiative, the Research Team will use gameplay data and analytics to systematically improve engagement and learning outcomes in games. The Research Team will identify the pathways users take through the games; conduct large-scale randomized controlled trials to test game features such as UDL approaches, features of the accessibility panel, incentive and motivational structures, instructional and feedback features, and variations on game mechanics (e.g. pacing); and develop, validate and use game-based measures to assess children’s knowledge and learning. This work, which will include three large-scale data analytics RCTs with 10,000 public users each, and two validation studies with 150 users each, represents a groundbreaking opportunity to gain a detailed understanding of how games are used in natural settings, develop high-quality, game-based measures that are sensitive to player knowledge, skills, and abilities, learn how different approaches to gameplay affect learning, and ultimately improve game experiences to promote learning outcomes.

Summative Research: Studying the Efficacy of Transmedia & Community Programs

Summative research will include multiple studies to assess the effectiveness of the Project in achieving its goals, as follows:



Learn Together Project Goals

Associated Research Study

Children will begin to:	
1	Develop increased Functional Literacy, Critical Thinking, Collaboration, and World of Work Skills and Knowledge
2	Explore the world of work, the way it is organized, and the opportunities it presents
3	Build an identity that enables them to connect their interests and talents to the world of work, and see themselves as meaningful future contributors
Families and communities will:	
4	Become empowered with knowledge and skills to support children's growth, learning, and development, specifically around development of the Project's four Key Skills
5	Be equipped with the tools and resources to support children's learning anytime, anywhere, and develop the confidence and capacity to use those tools effectively
6	Contribute to increased learning gains in children as a result of intergenerational learning experiences

5. Efficacy Studies: Three studies will explore learning outcomes related to engagement with specific Project resources and content. These studies will test the efficacy of: *Molly of Denali* short form series content and the Original Podcast Series 1 in Year 2 and the Literacy Series in Year 5. Although these studies are faster and more modest in scale than the randomized control trials, they will provide a preliminary understanding of the extent to which newer media and platforms hold promise for learning. Dimensions of this research will evaluate the promise of podcasts for supporting intergenerational listening and learning related to understanding of the World of Work (Gomez & Beachum, 2019; Lent et al., 2000); interest in exploring the World of Work (Tracy & Ward, 1998); and the formation of an identity that enables children to envision themselves within the World of Work (Bandura et al., 2001). Research also will explore the promise of the short form media and new literacy series for supporting the development of children's functional literacy skills.

6. Randomized Control Trials: The Research Team will build on their experience conducting rigorous summative research of the Project Team's 2015-2020 RTL Project to conduct two RCTs that assess the impact of *Wombats!* and *Liza Loops* on children's and parents' learning. (Due to its Year 5 launch, the new Literacy Series will be the focus of a smaller efficacy study). The RCTs are designed to meet the WWC evidence standards without reservations. Researchers will draw on strategies used in prior studies that have resulted in successful recruitment and retention of typically hard-to-reach low-income families (e.g. Grindal et al, 2019; Kennedy, forthcoming) and will incorporate appropriate outcome measures that demonstrate reliability and face validity, and that are not over-aligned to the intervention. The Research Team will register these studies with the Registry of Efficacy and Effectiveness Studies.

The *Wombats!* research study will be guided by the primary research question: 1) *What is the impact of providing children and their families with 8 weeks of access to Wombats! media resources on children's computational thinking and flexible thinking and task persistence skills?*; and three exploratory research questions: 2) *In what ways, if at all, does the impact of the Wombats! media resources on child outcomes differ for relevant subgroups of children?* 3) *To what extent is variation in child use of the Wombats! resources related to differences in children's computational thinking and flexible thinking and task persistence skills?* and, 4) *What is the impact of Wombats! media resources on parents' behavior and attitudes related to supporting their children's computational thinking and flexible thinking and task persistence skills?* The *Liza Loops* study will be guided by the same questions, but will focus on computational thinking and communication and collaboration skills as outcomes, rather than flexible thinking and task persistence, to align with the learning goals of the media resources.

Samples. The sample for each of the RCTs will include children from low-income households from four to five locations in the US, with an initial sample size of 530. Power analyses suggest this

sample size would allow for detection of a minimum effect size of approximately 0.22 SD, an effect size that is aligned with typical effects for the focal outcomes (see Appendix H). The Research Team will recruit a sample of low-income families with diverse ethnic/racial backgrounds, including English and Spanish-speaking families, as well as children with identified disabilities. The *Wombats!* study will focus on preschool-age children and their families and the *Liza Loops* study will focus on first- and second-grade students and their families.

Study Design. The Research Team will use an individual random assignment design to randomly assign children to the treatment or control group. Researchers will ask treatment families to use the transmedia content for an hour each week over 8 weeks and control families to use the device and select educational media of their choice for an hour each week. Control families will have access to a delayed treatment at the end of the study. In the case that in-person study enrollment is not possible, the Research Team has expertise in developing and administering remote study data collection (i.e. Kennedy et al., 2020). The study intervention will align as closely as possible to how children and families might engage with the media in the real world, while balancing the need to ensure children access sufficient content during the relatively short study timeline. Therefore, the Research Team will provide families in both treatment and control conditions with data-enabled tablets to allow for separation of the effects of the intervention from the effects of varying technologies and to minimize digital inequities among participants. The Research Team will track participants' use of intervention media resources using data analytics tracking of study participant pathways of game use, and research apps to track video and web use.

Measures. Prior to each RCT, researchers will conduct a pilot study with a sample that has similar characteristics to those in the full RCTs to test and revise measures for the RCT, including new protocols, approaches to analytics tracking and outcome assessments. The following assessments will

serve as both baseline and outcome assessments, and will be administered individually to each participating child:

- **Computational thinking** (problem-solving, sequencing and planning; *Wombats!* and *Liza Loops* study). As there is no widely accepted assessment of young children's computational thinking, researchers will adapt and pilot existing measures, such as those developed by Bers et al (2014) to measure young children's computational thinking in the context of a robotics intervention, and Dominguez et al (under review) and Lavigne et al's (2020) performance tasks measures. The Research Team has extensive experience developing and testing new assessments of young children's learning and development (e.g. Pasnik et al, 2015; Grindal et al, 2019) and will build on this experience to develop the new computational thinking assessments.
- **Flexible thinking and task persistence** (*Wombats!* study) using the Flanker Task, a widely used computer-based assessment of executive function skills with established reliability and validity and that is sensitive to intervention (Pandey et al, 2018; Ribner et al, 2017; Yang et al, 2017).
- **Functional literacy and specifically, communication and collaboration skills** (*Liza Loops* study) using the Social Skills Improvement Scale, which has evidence of convergent and predictive validity (e.g., Gresham, Elliott, Vance, & Cook, 2011; Malecki & Elliot, 2002) and is sensitive to interventions (Hemmeter, Snyder, Fox, and & Algina, 2016). This measure includes sub-scales for communication, cooperation, assertion, responsibility, empathy, engagement, and self-control. Few other parent-report measures of empathy or perspective-taking exist for this age bracket, and relying on parent reports rather than direct assessments will also ensure that child assessments are short enough to match young children's ability to focus.

To assess changes in caregiver knowledge and behaviors related to computational thinking, flexible thinking and task persistence, communication and collaboration and use of media to support learning, the Research Team will adapt existing survey measures that assess parent engagement and media use to support learning in these content areas, and that have established reliability (e.g. Connell, Lauricella & Wartella, 2015; Lavigne et al, 2020; Rasmussen et al, 2016). Parent surveys will be available in English and Spanish.

Analyses. The Research Team will use multivariate linear regression (ordinary least squares) to examine differences in posttest outcomes between the treatment- and control-assigned participants, and control for children's (or parents') baseline pre-test scores, and add interactions of the subgroup and treatment indicators to the analyses to examine whether the impacts differ by subgroup. To understand how media use relates to children's outcomes, the Research Team will incorporate video- and game-based measures of engagement into analyses.

Knowledge-Building for the Field and Amplifying the Impact of Research

The Research Team has had considerable success reaching diverse audiences through peer-reviewed journals and convenings (e.g., *Early Childhood Research Quarterly*, SREE), national news outlets (e.g. *The Washington Post*, *Christian Science Monitor*, *The 74*), high-profile conferences, as well as the book *Getting Ready to Learn: Creating Effective, Educational Media* (Routledge, 2019), which is devoted to the rich history, production, research, and importance of the CPB-PBS-led Initiative. For 2020-25, the research communication agenda will deepen the understanding of how to incorporate educational media in complex contexts to support families and children's learning, especially for those with greatest need.

The Project is a collaboration between CPB and PBS, who for 25 years have successfully led and delivered RTL initiatives on time, within budget and in compliance with federal rules and regulations. CPB and PBS will leverage existing human and institutional resources and infrastructure to ensure the Project's successful implementation. With consistent "high quality" Government Performance Results Act review scores and a proven record of adhering to industry standards and generally accepted accounting principles (US GAAP), CPB and PBS have demonstrated exceptional management performance that will be leveraged for the 2020-2025 RTL cycle. CPB and PBS have a pre-existing memorandum of understanding (see Appendix B) allowing the Project Team to begin addressing first-year objectives immediately upon award, and to continue in Years 2–5 with sustained effort and high-level performance.

Organizational Roles and Responsibilities

CPB will serve as fiscal agent, supervising the compliance, monitoring, and reporting of the grant in accordance with all applicable regulations; will lead the community-driven engagement and summative research components of the Project; and will manage the partnership with the U.S. Chamber of Commerce Foundation, as well as coordinate the activities of the Project Advisory Board. CPB supports more than 1,500 locally managed public television and radio stations serving nearly 99% of the American population living in rural, small-town and urban communities in all 50 states, the District of Columbia, and four commonwealths and territories. CPB management team has decades of experience spearheading investments in innovative public television, radio, and related online and mobile services to support the American public. It also has a breadth of expertise in education, engagement, research, and providing sound fiscal management and a track record in funding the leading children's content producers nationwide. As stewards of the federal government's investment in public media, CPB has mechanisms in place to ensure accountability,

management quality, and continuous improvement of management, including an internal, independent Inspector General (IG). The IG's mission is to promote the efficiency, effectiveness, and integrity of CPB initiatives and operations by conducting independent and objective audits, investigations, and other reviews.

PBS will lead production and distribution of all media; select and oversee content producers; and manage all aspects of video, game, podcast, and resource development; data analytics; formative research on RTL content; and the partnerships with Parents As Teachers and the National Association for the Education of Young Children. PBS is responsible for distributing content across the wide range of PBS-owned and third-party content platforms described in this proposal, and will execute communications and marketing strategies. For 50 years, PBS has worked with diverse producers to create and distribute effective, high-quality children's transmedia content to the platforms most used by families in the U.S. PBS has a nationally recognized senior management team, which includes a federal grants compliance officer as well as senior business, legal, and financial professionals experienced in managing large, federally sponsored projects. The corporate management structure supports development and delivery of high-quality educational content on time and on budget.

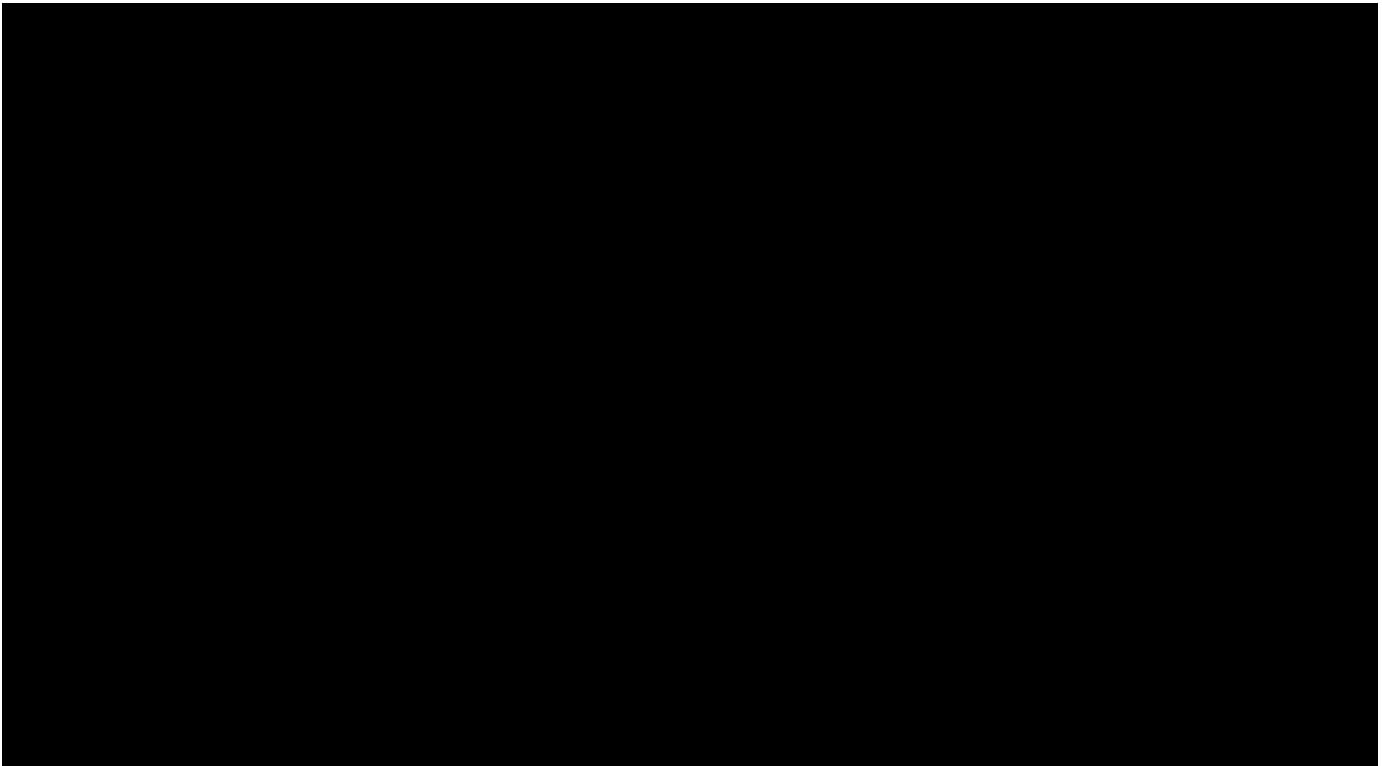
Project Management

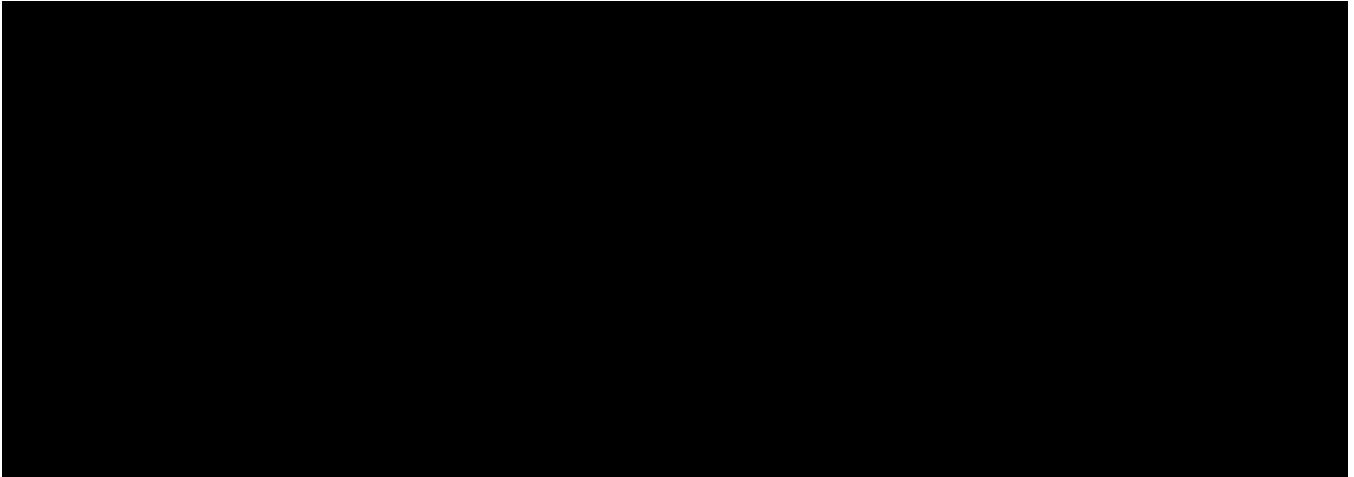
CPB and PBS have a disciplined approach to project planning and have created realistic management schedules, timelines, and budgets. See Appendix B for detail on the Management Plan and Project Team members, and an organizational chart that depicts the Project's integrated organizational structure.

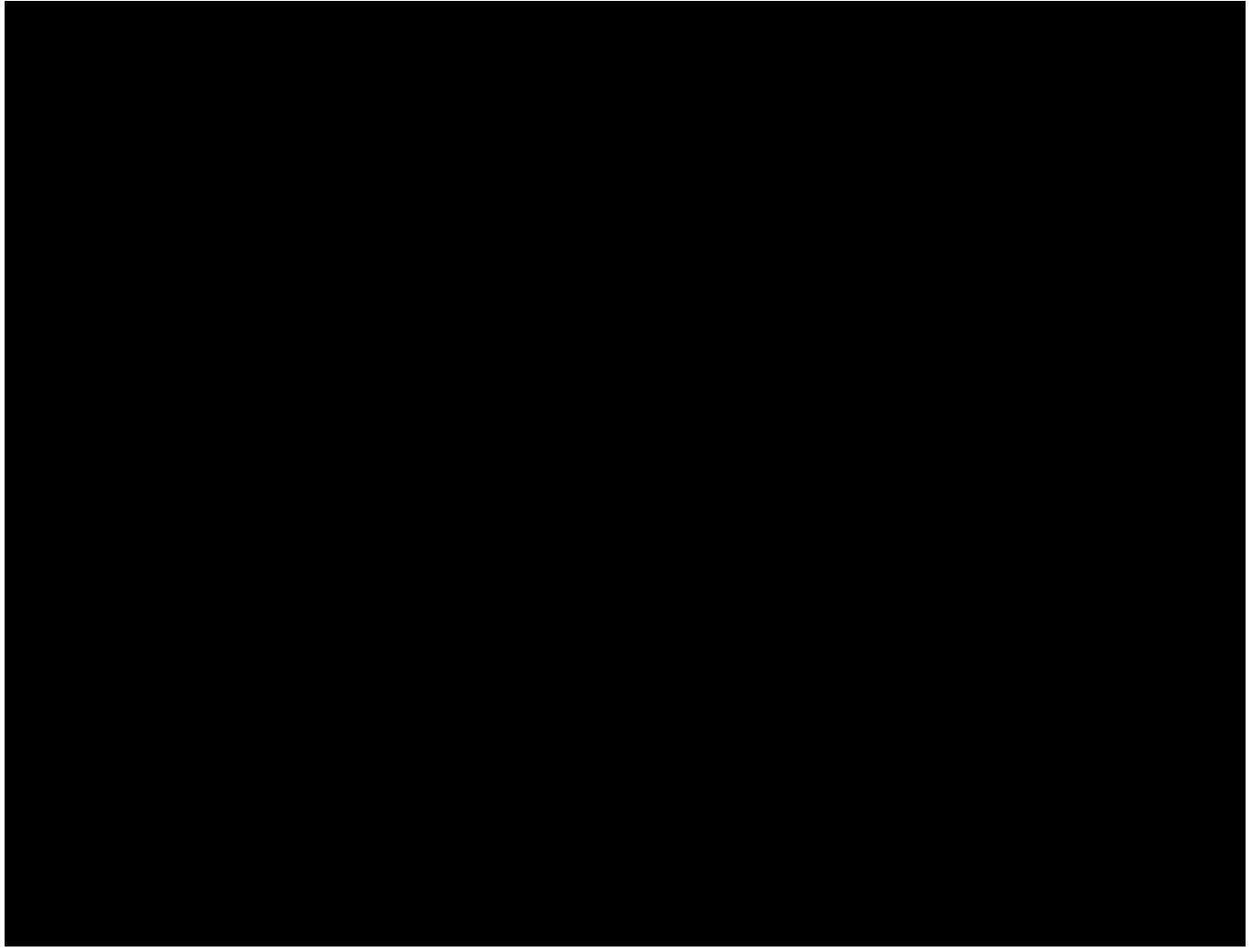
Communications and Coordination: The Project Team is practiced in and commits to regular calls, meetings, and other methods of communications to facilitate development of ideas and decision-making among project partners. The Project Team will use online collaboration and project

management tools to exchange deliverables and manage shared documents and timelines. The Team will also engage in best practices in connecting with producers, partners, stations, experts, advisors, and national leadership through both closed and open communities, which may include webinars, MS Teams, Basecamp, and Facebook Groups. CPB and PBS are both located in the Washington, DC, Metropolitan Area, enabling frequent in-person meetings and coordination.

Commitment to Diversity and Inclusion: CPB and PBS are committed to employing women, minorities, and people from underrepresented populations, and will not discriminate against any individual based on race, color, religion, national origin, sex, age, pregnancy, marital status, personal appearance, sexual orientation, gender identity, family responsibilities, physical or mental handicap or disability, matriculation, or political affiliation. The boards of CPB and PBS annually implement plans to ensure and maintain diversity in their workforces. The Project itself emphasizes diversity and inclusion, and Equity Advisors will ensure that the content and resources reflects the authentic needs, interests, and experiences of the diverse American public and the Project's target audience.







Advisory Board:

To inform and guide the overall initiative and new content being developed, CPB and PBS will form a RTL National Advisory Board, consisting of an interdisciplinary and diverse group of experts and thought leaders in workforce and career readiness, literacy, children and families, and equity, accessibility, and children's media. The board will convene at least once a year. See Appendix B for complete biographies of the Advisory Board members.

World of Work and Skills for Success Advisors: Marina Bers, Professor and Chair, Eliot-Pearson Department of Child Study and Human Development in the Department of Computer Science and DevTech Research Group Director at Tufts University. Ellen Galinsky, President of the Families and Work Institute. Roberta Golinkoff, Unidel H. Rodney Sharp Professor of Education, Psychological and Brain Sciences, and Linguistics and Cognitive Science, University of Delaware and Director of

the Child's Play, Learning, and Development Lab. Kathy Hirsh-Pasek, Stanley and Debra Lefkowitz Faculty Fellow in the Department of Psychology, Temple University and Senior Fellow at Brookings Institution. Megan McClelland, Katherine E. Smith Professor of Healthy Children and Families at Oregon State University and Endowed Director at the Hallie E. Ford Center for Healthy Children and Families. V. Scott Solsberg, Professor, Department of Counseling and Applied Human Development at Boston University's Wheelock College of Education and Human Development. Ross Thompson, Distinguished Professor of Psychology at the University of California-Davis and Director of the Social and Emotional Development Lab.

Literacy Advisors: Kelly Cartwright, Professor of Psychology, Neuroscience, and Teacher Preparation at Christopher Newport University and director of the Reading, Executive function, and Development Lab (READ Lab). Nell Duke, Professor, School of Education at the University of Michigan. Rebecca Silverman, Associate Professor, Graduate School of Education at Stanford University. Yuuko Uchikoshi Tonkovich, Professor in the School of Education, University of California-Davis.

Children and Families Advisors: Sharon Darling, President and Founder of the National Center for Families Learning. Gillian Najarian, Managing Director of the Center for the Developing Child at Harvard University. Marjorie Sims, Managing Director of the Ascend Program at Aspen Institute in collaboration with a Parent Leader from the intergenerational Ascend initiative. Ralph Smith, Managing Director of the Campaign for Grade Level Reading.

Equity, Accessibility, and Children's Media Advisors: Rosemarie Allen, President and CEO of the Center for Equity and Excellence and Assistant Professor of Early Childhood Education at Metropolitan State University of Denver. Jamal Berry, Deputy Director of Educare DC. Michael Conn-Powers, Director of the Early Childhood Center at Indiana Institute on Disability and

Community at Indiana University-Bloomington. Chris Dede, Timothy E. Wirth Professor in Learning Technologies at Harvard University. Lisa Guernsey, Director of the Teaching, Learning, and Tech Program at New America.

Timeline: A top-level timeline of Deliverables follows; a detailed Project Timeline is in Appendix F.

<p>Year 1: UDL Framework, Updated Literacy Framework, Computational Thinking Curriculum. Advisory Board convening. <i>Wombats</i> (scripts, episodes, game prototypes), <i>Liza Loops</i> (pilot), <i>Molly of Denali</i> short form series (episodes, game), [REDACTED] <i>Career Role Models</i> short form (episodes). <i>Original Intergenerational Podcast Series</i>, (RFP, produce and test pilots). Formative testing. Learn Together Hub prototype development. Learn Together content development. Activate 12 regional Learning Neighborhoods (LNs). Co-Design Collaborative, community resources. Game design and data analytics plan. Needs assessment. Accessibility panel R&D.</p>
<p>Year 2: Advisory Board convening. <i>Wombats!</i> (scripts, episodes, games, website), <i>Liza Loops</i> (scripts, episodes, games website). <i>New Literacy Series</i> (RFP, selection, scripts, pilot). <i>Molly of Denali</i> short form series (episodes and game). <i>Career Role Models</i> short-form series (episodes). [REDACTED] <i>Video + Game Hybrid</i> (RFP, pilot, production). <i>Original Intergenerational Podcast Series</i> (episodes, website). Formative testing. Learn Together Hub production. Learn Together content development. 10 additional Learning Neighborhoods (RFP and activate). Co-Design Collaborative, community engagement resources. Implementation and Context Studies: intergenerational learning, Learning Neighborhoods. Game-based measures. Phase 1 of Randomized-Controlled Trials (RCTs): <i>Wombats</i> (pilot study). Innovation Study: <i>Molly of Denali</i> short-form series + game, <i>Original Intergenerational Podcast series</i>. Accessibility panel R&D.</p>
<p>Year 3: Advisory Board convening. <i>Wombats!</i> (episodes, games, website). <i>Liza Loops</i> (episodes, games, website). <i>New Literacy Series</i> (scripts, episodes, games, website). [REDACTED] <i>Video + Game Hybrid</i> (episodes, game). <i>Original Intergenerational Podcast</i> (episodes, website). <i>New Literacy series</i> (scripts, episodes). Formative testing. Conversational UI and voice experiment (RFP, production). Learn Together content development. RFP for additional LN. Co-Design Collaborative, community engagement resources. Context study: Learning Neighborhoods. Data Analytics Research: Play Pattern study, Analytics RCT on <i>Wombats</i> games. RCT pilot study: <i>Wombats</i>. Efficacy Study: <i>Wombats</i>. RCT Pilot Study plan: <i>Liza Loops</i>. Innovation study: <i>Molly of Denali</i> short form + game. Accessibility panel. Content Promotion.</p>
<p>Year 4: RTL Advisory Board convening. <i>Liza Loops</i> (episodes, games, website). <i>Wombats!</i> (episodes, games, website). <i>New Literacy Series</i> (episodes, games, website). <i>Video + Game Hybrid</i> series (episodes, game). <i>Original Intergenerational Podcast</i> (episodes, website). <i>Series-related podcast</i> (episodes). Formative testing. Learn Together content development. 18 additional LN. Community engagement resources. Data Analytics: Play Pattern Studies, Analytics RCT on <i>Liza Loops</i>. RCT Pilot Study: <i>Liza Loops</i> Efficacy Study: <i>Liza Loops</i>. R&D of Conversation UX experiment. Content promotion and research dissemination.</p>
<p>Year 5: RTL Advisory Board convening. <i>New Literacy Series</i> (episodes, games, website). <i>Wombats!</i> (episodes, games). <i>Liza Loops</i> (episodes, games). <i>Video + Games Hybrid</i> series (episodes, game). <i>Series-related podcast</i> (episodes). Learn Together content development. Community engagement resources. Continued implementation and sustainability planning by LN. Data Analytics: Play Pattern Study, Analytics RCT on the <i>New Literacy Series</i>. Innovation Study: <i>New Literacy Series</i>. Content promotion and research dissemination.</p>