Storytime Inventing

Fostering 21st Century Literacy through the Convergence of Reading and Invention

TOGETHER WE CAN...

Read
IMAGINE
INVENT

Together we can...
About Kid Spark Education

Kid Spark Education is a national STEM education nonprofit that partners with schools and informal education providers across the United States to provide consistent, hands-on STEM education to Pre-K - 8th grade students. Our goal is to bridge the widening STEM achievement gap and prepare all children to succeed in the 21st century. Kid Spark focuses on reaching students who are systemically underserved or underrepresented based on race, gender, and economic or geographic disadvantage.

Since 2009, Kid Spark has partnered with educational researchers and educators to ensure the effectiveness of our programs in enhancing children’s STEM skills, knowledge, confidence, and curiosity. Our dedicated research efforts over the past five years have unequivocally demonstrated the success of Kid Spark in achieving its goals.

- **Elementary school children who participate in Kid Spark’s STEM program report a dramatic increase in how much they like or love STEM.**

- **Educators using Kid Spark’s program report that their students substantially increase learning of STEM concepts and show increases in curiosity and creativity.**

- **Educators report significant increases in their own comfort with teaching STEM.**

Early exposure to STEM is pivotal, influencing children’s decisions regarding STEM paths by grade 3 or 4. Disparities in this early exposure often dissuade underserved youth from pursuing STEM paths, leading to a loss of talent and innovation across generations. Kid Spark exists to disrupt this pattern by providing continuous STEM education from the earliest years of schooling, aiming for transformative change in both formal and after-school educational settings.
Introducing Storytime Inventing

Kid Spark is embarking on an innovative initiative to support early childhood literacy in the 21st century with the launch of Storytime Inventing. This groundbreaking initiative represents a significant expansion of their commitment to nurturing positive STEM identities and fostering inventive mindsets among young learners.

By merging the worlds of literature and hands-on engineering, Storytime Inventing introduces an innovative perspective on literacy development and STEM education. Through this unique approach, students not only enhance their reading skills but also engage deeply with STEM concepts, fostering a love for learning that extends far beyond the pages of a book.

In the 21st century, literacy encompasses more than traditional skills like reading, writing, and basic math; it involves developing a strong STEM identity and an inventive mindset. These competencies enhance critical thinking and problem-solving skills, preparing children for success in our increasingly technology-driven world, and providing valuable skills for diverse life paths.
Through this reciprocal approach, Storytime Inventing bridges the gap between literacy and STEM education, empowering children to apply what they’ve read and learned in meaningful and imaginative ways while advancing their literacy skills.
Children will develop an inventive mindset, empowering them to confidently apply their knowledge and skills to invent and solve problems creatively.

Children will cultivate a robust STEM identity, envisioning themselves as adept learners and active participants in the realms of science, technology, engineering, and mathematics.

Children will demonstrate enhanced comprehension of storylines and concepts presented in literature.

Children will demonstrate enhanced reading skills and engagement.

Educators and mentors will enhance their confidence in teaching STEM concepts through the familiar medium of reading, facilitating a more seamless integration of STEM education into their instruction.
Phase 1 (May 2024)
Debut at San Diego Children’s Discovery Museum

Kid Spark Education and The San Diego Children’s Discovery Museum (SDCDM) have collaborated to produce Storytime Inventing, a new exhibit that will debut at the museum in May of 2024. Utilizing large format, original artwork, the architecture and design of the exhibit guides the activities. Depicting children and adults collaborating in reading and inventing, the aim is to redefine how caregivers and children interact to develop literacy and positive STEM identity. The exhibit will undergo careful deployment and study, providing helpful insight for the future use of Storytime Inventing in schools and informal learning spaces nationwide.

Phase 2 (Spring 2025)
Integration into Schools and Informal Learning Settings

Leveraging insights gained from the Storytime Inventing exhibit at SDCDM, Kid Spark will develop and seamlessly integrate Storytime Inventing materials, curriculum, and training into all of their early learning programs for distribution nationwide. Scheduled for an early 2025 release, this initiative ensures that children throughout the country can participate in Storytime Inventing directly from their classrooms or informal learning spaces.
RESEARCH QUESTIONS

Kid Spark Education has a rich history of collaboration with researchers and educators from esteemed university partners. This longstanding tradition will continue with Storytime Inventing, including the design, evaluation, and enhancement of engineering materials, curricula, professional development programs, and support resources. The project gives rise to pivotal research questions as it explores the intersection of literacy and STEM education:

01. Can Storytime Inventing improve children’s reading skills and engagement by integrating literature with hands-on STEM experiences, and are there discernible differences in literacy and STEM skill development compared to traditional educational approaches?

02. To what extent does Storytime Inventing contribute to children’s understanding and comprehension of stories and their content? Does the integration of STEM concepts into the narrative enrich the overall learning experience?

03. Is Storytime Inventing an effective gateway for early elementary educators to gain confidence in teaching STEM? By introducing STEM concepts through a familiar medium like reading, does it facilitate a smoother transition for educators, making STEM instruction more approachable?

04. Are there variations in the effectiveness of Storytime Inventing across different demographic groups or educational settings?

05. How does participation in Storytime Inventing influence students’ overall attitudes and perceptions towards reading and STEM subjects?
Kid Spark Education extends an invitation to potential partners to collaborate and support Storytime Inventing nationwide. Various avenues are available for organizations, universities, nonprofits, individuals, or others to get involved.

Opportunity 1: Support Development Initiatives

Curriculum:

Kid Spark Education is actively designing dozens of Storytime Inventing lessons/activities. Partners are encouraged to propose and provide financial support for additional sponsor-themed activities/lessons.

New Kid Spark Engineering Materials:

Kid Spark is currently designing new student engineering components for Storytime Inventing, catering to diverse learners, including those with disabilities. The total cost for engineering and tooling exceeds $100,000, and contributions to support developing these new student engineering materials are pivotal.
Opportunity 2: Support our STEM Equity Grants Initiative

The STEM Equity Grants Initiative offers schools and informal learning providers free or reduced-cost access to Kid Spark’s Educational Programs. Each grant supports everything schools or informal learning providers need to successfully launch a STEM program, including curriculum, student engineering materials, and professional development for educators. The cost of awarding a school or extended education provider a program ranges from $6,000 to $18,000. Kid Spark is scheduled to launch Storytime Inventing within their elementary STEM programs in early 2025.

Opportunity 3: Support Research

Kid Spark Education is assembling a team of educators and researchers from university partners who will contribute expertise, design, and evaluations to this innovative literacy-with-invention approach to 21st Century Literacy. Funding support for research costs is critical and will further enhance the credibility and expand the reach of Storytime Inventing nationwide.
Conclusion

In the dynamic landscape of education, Kid Spark Education stands at the forefront of early childhood STEM education, championing innovative approaches to bridge the gap for underserved students. With the launch of Storytime Inventing, we embark on a journey to support 21st-century literacy, empowering children to thrive in an ever-evolving world.

Through collaboration with children's literacy experts, our initiative seamlessly integrates captivating children's books with hands-on engineering experiences. By fostering a love for reading and exploration, Storytime Inventing not only enhances literacy skills but also cultivates a strong STEM identity and an inventive mindset in children.

As we unveil Storytime Inventing, we envision a future where every child is provided the opportunity to engage in meaningful learning experiences that transcend traditional boundaries. Our implementation strategy, backed by research and supported by valuable partnerships, will ensure that Storytime Inventing reaches schools and informal learning providers nationwide, enriching the educational landscape for generations to come.

We invite you to join us on this transformative journey. Together, let's inspire curiosity, ignite imaginations, and empower learners to unlock their full potential in the realms of literacy, STEM, and beyond. With Storytime Inventing, the possibilities are endless and the impact is profound.

GET INVOLVED!

If you'd like to learn more about the Storytime Inventing project or explore how you or your organization can get involved, please contact us at:

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