

KidCitizen: Designing an App for Inquiry with Primary Sources

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Game-based learning not only contributes to a learning environment that is interesting and engaging for students but also fosters collaboration while meeting educational goals.¹ Recognizing the potential of digital games to promote primary-source use for discovery and problem-solving, the Library of Congress established funding to advance the development of digital apps for a variety of grade levels. The KidCitizen project aims to develop a free cross-platform app that provides game-based learning activities with primary sources for K-5 students. KidCitizen's interdisciplinary team of historians, educators, child development specialists, and game designers are integrating the Inquiry Design Model with game-based learning approaches.² The KidCitizen app, which will be accessible to teachers this spring, provides authentic, age appropriate interaction with primary-source materials, is guided by research-informed practices and evidence-based pedagogy, engages children in exploring civics and government concepts through historical sources, and helps them make connections with their daily lives.

The app's "episodes" capitalize on the active and social nature of young children's learning, using primary sources for rich demonstrations, interactions, and models of literacy with hands-on activities that make academic content meaningful, build on prior experiences, and foster visual literacy and historical inquiry. The centerpiece of each episode is a photograph from the Library of Congress that is complemented with other primary sources relevant to the topic of focus. Images are selected based on research into artifacts that are developmentally appropriate for early childhood and elementary grades.³ Historical primary sources are aesthetically appealing, activating the interest of young students through visual content that conveys meaning and enhances understanding of concepts or events. However, not all images are appropriate for young learners, nor would all images or sources

enable young students to develop historical understanding.⁴ Therefore, each episode of the app begins with an image that features children as the subjects of the primary source. This familiar imagery offers content that is accessible to young users so that they may begin their inquiry by drawing from existing knowledge; yet as the primary source is revealed students discover ambiguity or puzzling content that challenges their thinking. A scaffolded learning experience engages young learners in an inquiry process that builds their conceptual knowledge as well as increasingly complex historical thinking skills.

The game mechanics reflect current research on age-appropriate design for elementary age children,⁵ looking at how they approach and process images and media⁶ and think about past events.⁷ A helper character named Ella (intended to simulate the collaborative conditions

that optimize students' construction of knowledge and meaning) accompanies students through the process of interpreting the past, encouraging learners to progress through phases of careful observation (e.g., What do you see?), analysis (What do you think?), drawing conclusions based on collected evidence, and reflection that propels the students into further inquiry (What do you wonder?). Ella provokes critical thinking through her questioning and comments.

The episodes are designed as manageable, modular experiences of 10–20 minutes, a time that makes it easy for children to pick up and play frequently within the time limits of class instructional periods. When entering an episode, Ella explains what a primary source is, using concrete examples. Throughout the game, Ella continues to provide explicit "hard" scaffolding to the basic steps for historical inquiry, allowing the player to quickly learn how to engage in the process of primary-source analysis. The learning is incremental, and authentic interaction with a primary source is the center of the activity, drawing children into the images and other sources in the following ways.

Focusing: A historical photograph can present a complex scenario that elementary children may not easily explain. The app zooms in on interesting areas of the photograph, with prompts to help children grasp what becomes visible.

Observation and Analysis Tools: Guided interactions help children



observe and reflect as they find people, objects, or activities. They collect information into a “Researcher Journal” and use this information to raise questions or make inferences based on observations. These activities draw on primary-source analysis frameworks from the Library of Congress’s Teaching with Primary Sources program. The frameworks use inquiry-based instruction to build literacy, critical thinking skills, and content knowledge.

Moving from Investigation of the Past to Action in the Present: The episodes transition children from investigating the primary source back to their present lives, and give them a prompt to perform a civic activity (e.g., helping out in their school

or home). Students draw from data in their researcher journal to construct posters, timelines, or other outputs as they document connections between what they find and their own lives.

Throughout the episodes, provisional ideas are welcome, but visual evidence is consistently sought. To encourage multiple interpretations of the content and engage children in weighing legitimate competing options, the games do not include scores or points that might push children toward a particular response.

For example, in an episode on community helpers for grades K-2, the children explore a compelling image associated with the essential question: How have community helpers changed and stayed the same over time? Students examine an image of an ice deliveryman visiting children outside their Washington, D.C., school in 1899. Before the invention of refrigeration, people could not keep food properly cold without the use of an icebox. At that time, ice did not come from a store, but rather was cut from frozen lakes and rivers in the northern part of the country. Therefore, people who delivered ice to homes and businesses were critical to communities.

In the community helpers app episode, the children use clues from the image to interpret the roles of the two adults in the picture. After collecting evidence from the image, a student is asked, “What do you think the woman does for a job?” They are provided with choices of Mother, Teacher, or Cart Driver. After selecting a choice of roles, the child must use collected clues to support his or her decision. The student progresses through a similar process to explore the role of the man in the image as a community helper.

In a pilot implementation with kindergarteners, students demonstrated high levels of Interest, engagement, and excitement. Young learners gradually expanded their intentional observation skills, and their interactions became more complex with increasingly detailed observations that served as the evidence-base for inferences. The app provided opportunities for multiple interpretations with several equally plausible meanings, and learners countered their own first impressions, revising their ideas as new information expanded or clarified their thinking. The process of carefully looking, thinking, and supporting their ideas led the children to express an interest in knowing more about the makers of the images and their intentions, which motivated them to seek additional information from other sources.

KidCitizen offers a robust set of freely available learning experiences. Episodes address a range of topics related to the role of Congress as well as how children’s civic participation has made a difference in their communities throughout history. In an episode on child labor for Grades 3–5, students explore primary sources to answer the essential question: Why did Congress pass child labor laws to protect children long ago? Throughout their exploration, students are introduced to the role and function of Congress and learn how Congress has enacted laws to improve the quality of the lives of children. Throughout the app episode, students use primary source analysis strategies to observe and analyze photographs by Lewis Hine from the National Child

Labor Committee Collection available from the Library of Congress.

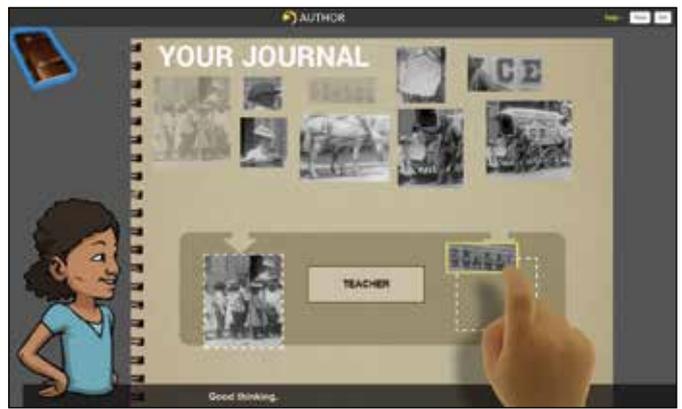
Additional episode topics include:

	Civic Participation	Congress
K-2	Community Helpers	Welcome to Congress
	Kids in Action: Recycling	Congress and School Lunch
	Capture the Flag (relates to both topics)	
3-5	Snap a Photo: Agent of Change	Congress and the National Parks
	Raise Your Voice	Child Labor

Since young learners have limited prior knowledge of historical events, teacher's guides accompany each episode and include supplemental content. By providing teachers with multiple resources and curricular materials, teachers may engage in deeper exploration and enhance their confidence and preparation for classroom implementation.

Teacher-Created Content

In addition, KidCitizen gives teachers the power to easily customize episodes or create new ones using tools and templates in the Muzzy Lane Author cloud platform. Teachers may add their own primary-source photos, set up their own game-based



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activities, and share their episodes with students. Author is a breakthrough for game-based learning that combines powerful design features with ease-of-use. Using simple word-processing skills, teachers can create rich interactive learning experiences that students can play on any device, including desktops, tablets, or mobile phones. Since Author activities are web-based, they are accessible on any operating system. Every activity designed with Muzzy Lane Author generates a link that teachers can easily share with students; activities may also be seamlessly integrated with learning management systems, including Blackboard, Moodle, Canvas, and Google Classroom.

The models of learning showcased in the KidCitizen templates can be leveraged by teachers to support disciplined inquiry in the social studies. The templates help teachers consider strategies for engaging students in the games and provide examples of questions that support and scaffold historical inquiry and disciplinary specific process skills for students while using the app. These products help instructors move their existing content into a more playful space, while increasing value placed on historical inquiry and civic engagement experiences.

Conclusion

The focus of the KidCitizen app is to facilitate a developmentally appropriate process of careful looking, historical thinking, and evidence-informed analysis that are at the center of disciplinary literacy. By slowing down the act of looking, children discover new information and construct viewpoints as primary sources are mined.

KidCitizen is from the Congress, Civic Participation, and Primary Sources Project, supported by a grant from the Library of Congress. Links to access the app and teacher training resources will be available at kidcitizen.net, and professional development will be announced through the TPS Teachers Network <https://tpsteachernetwork.org>.

Notes

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