

Bringing Pixels to Life: A Hands-On Journey Through Pixel Art

This grant proposal, titled “Bringing Pixels to Life: A Hands-On Journey Through Pixel Art,” would give my middle school students the chance to turn pixels into personal masterpieces - blending creativity, math, and technology in one innovative, hands-on unit! In this project, students will explore the concept of pixels—the tiny building blocks of digital imagery—by translating digital ideas into tangible art.

Students will begin by examining how digital images—and retro video games from the 1980s—are built from tiny squares called pixels, and how these early graphics laid the foundation for modern digital art. Students will then break down images using graph paper, understanding how resolution and detail are affected by pixel count. From there, they’ll design their own pixel self-portraits or original graphics. The final step is hands-on and tactile: students will transfer their pixel designs into Perler bead creations, which will be fused with heat to create durable plastic art pieces. These finished artworks will be displayed in the school, showcasing student creativity and their understanding of how art and technology intersect.

Kendra Grimes

Grade level(s) impacted: Sixth through eighth graders

Grant classification (subject): Art

Number of students impacted, 25-26: 200

How many years do you expect the project materials to last 2 years for consumable supplies, tools would be reusable every year

Purpose of the project and benefits anticipated for classroom/school This project provides a high-interest and technology-connected art experience that will reach a broad range of learners, especially those drawn to gaming, technology, and/or hands-on activities. By blending elements of STEAM (Science, Technology, Engineering, Art, and Math), it fosters critical skills like problem-solving, design thinking, and fine motor coordination. Additionally, by combining historical context (1980s gaming), art, and tactile creation, students connect with both the past and future of digital expression. This Pixel Art Unit is more than just a fun craft—it's an immersive way to turn abstract digital concepts into something tangible, relevant, and exciting! In a world increasingly driven by digital literacy, helping students understand the foundational concept of pixels bridges the gap between traditional and digital art, offering relevance and excitement. With support from the Broken Arrow Grant Foundation, we'll transform our classroom into a pixelated playground where learning and creativity will collide, one tiny square at a time.

Specific methods you will use to teach the above objectives The project will be implemented in the following stages:

Introduction to Pixels & Digital Imagery: Students will examine classic 8-bit video games like Mario and Pac-Man and explore how pixels come together to form images. We will examine key concepts like resolution, pixel grids, and color values.

Image Breakdown with Graph Paper: Students will practice converting simple images into pixel representations using graph paper and markers. We'll introduce pixel grids of varying complexity to help students understand how more pixels can create more detailed images.

Self-Portrait or Original Design Creation: Students will apply their knowledge of pixelation by designing their own original pixel art—either a self-portrait or a creative image of their choice—on graph paper.

Perler Bead Assembly: Students will transfer their design to Perler bead pegboards, which will be ironed to fuse the beads into durable, colorful plastic art pieces which will be displayed in the hallway.

Amount (less tax): 892.53

Shipping & Handling: 116.42

Vendor: Blick

Will there be any costs associated with the project going forward? Yes

If you answered yes, how do you plan to cover those costs? The tools from this grant can be reused for multiple years. When I want to repeat the lesson, I can simply repurchase just the consumable supplies using supply money.

How will the success of this proposal be measured and reported back to BAPSF and the community?

Success will be measured by full student participation in all stages of the project, with each student creating a completed piece to be featured in a collaborative hallway display.

Students will reflect on their artwork, participate in peer critiques, and receive feedback from both the teacher and classmates. As a class, we will engage in group discussions to review what they've learned about pixels, digital imagery, and the connection between art and technology.

We would be proud to share photographs of the finished projects with the Broken Arrow community, showcasing student creativity and the impact of this hands-on learning experience.

Is this a request for technology or a facilities alteration/installation? No