

# The Fresh Market: Connecting Content, Children, Families, and the Community

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*Preparations lasted for weeks. Students carefully created stalls, signs, and items to sell. They crafted paintings, necklaces, bracelets, homemade applesauce, banana pancakes, and organic lettuce grown in the school's garden. They discussed and decided on prices. Each took on a different role. They created "money" for the students in the other classrooms to purchase items, while agreeing that adults would use real money. They created brochures to hand out to classrooms and family members. Once everything was prepared, the entrepreneurs advertised their event.*

*It was a cool, crisp November morning when the big day finally arrived. The students placed their products and sale signs carefully. At 9:00 am, children and their parents rushed out together to see the market as it opened, walking from booth to booth to decide what to buy. Vendors were shouting, "Organic Lettuce \$3.00!" and "Come try my homemade applesauce!" Some of the parents tried to bargain about price of items, only to be met by the obstinate refusals of four-year-old vendors. By the end of the hour, most of the items were sold, and the market came to a happy close.*

The "Fresh Market" was the culmination of a three-month project that took place in a class of 29 four- and five-year olds at a university laboratory school. The USF Preschool for Creative Learning employs the Project Approach as a curricular framework to support engagement with authentic and meaningful inquiry. The Project Approach highlights the importance of listening to children, following their lead, seeing them as capable researchers, and providing real life experiences to question and explore.<sup>1</sup> While project topics arise from the interests of children, teachers can help assure that the topics studied center on concrete elements that are available for children to physically engage with. The nature of this approach situates young children as capable investigators of almost any topic as it applies to their lived experience. Within this framework, many topics and ideas are available for exploration that allow for authentic, deep investigation.

## The Connecting Thread

Projects unfold in three phases, mirroring the process of sci-

entific inquiry. Children talk about their personal knowledge as well as shared experiences to create research questions in Phase 1. The goal of this phase is finding out what children already know about a topic, and what they want to know more about. Children bring in artifacts from home regarding the topic, show their current knowledge on a web (see below), draw memory stories, and create second- or third-degree representations to give teachers an understanding of their conceptions and misconceptions about a topic. In Phase 2, students seek to answer their questions by researching new information and representing what they learn through drawings, body motions, or other expressions.

Teachers plan learning experiences for children in order to answer their research questions and provide in-depth knowledge of the topic. The teachers' classroom activities derive from their knowledge of young students and the central elements for understanding the topic.<sup>2</sup> This will include researching on the Internet, in books, and looking through published lesson plans. The class may go on field visits or have an expert come and visit them in the classroom. Students share their new knowledge through various mediums of representation including writing, drawing, graphing, paint, clay, dramatization, and construction. In Phase 3, they disseminate their learning by sharing what they know with others. A culminating event provides children with the opportunity to share what they have learned. There are many different ways to end a project to demonstrate knowledge, such as holding an event (a play, celebration, grand opening) or creating a product (a book, poster, or digital video) and sharing it with others. The conclusion should align with what the students accomplished over the course of the project, so this varies based on what the children are studying. This inquiry process gives children the opportunity to engage in multiple content areas simultaneously while exploring the real world around them.

Alongside the school's use of the Project Approach, the curriculum also intentionally integrates the STEM (Science, Technology, Engineering, and Math) approach of interdisciplinary instruction. The STEM movement started in 2001

with an update of the U.S. National Science Foundation's (NSF) existing SMET acronym. This rearrangement was the spearhead of an effort to revitalize their curricular outreach program<sup>3</sup> in response to the perceived deficit of American students in science-related studies compared to their international counterparts. In 2011, STEM evolved into STEAM with the infusion of Art into the curricular focus during an NSF-funded workshop at the Rhode Island School of Design, "Bridging STEM to STEAM: Developing New Frameworks for Art-Science-Design Pedagogy."<sup>4</sup> This resulted in a transdisciplinary approach to education that would enhance the quality of student learning by utilizing educational activities with a strong STEM focus, while emphasizing artistic expression and aesthetically pleasing results. Within a few years, educators and researchers clamored for STEAM to evolve once more into the acronym STREAM via the inclusion of explicit reading and writing instruction (thus, the "R"). Rather than adding in additional fields of study for students, these additions focus more on the integration of reading and writing strategies throughout existing STEAM activities. Inadvertently, these movements seem to have been too effective.

Studies of early childhood and elementary education indicate that students only experience an average of 15 minutes of social studies instruction per week.<sup>5</sup> Unfortunately, in the past several decades, there has been a distinct marginalization of social studies as a portion of the overall curriculum. Particularly in the earliest grades, the time allotted for social studies has been squeezed by the pressures of high-stakes testing and funding tied to more in-demand subject areas. The main avenue through which the social studies have been able to remain viable has been through integration into other pedagogical approaches and subjects' dedicated timeslots. Often, teachers feel they must "sneak in" texts on social studies issues during reading instruction blocks, or reach to find standards across disciplines in order to justify in writing their inclusion of social studies materials or strategies in non-social studies lesson plans.<sup>6</sup> While it is certainly arguable that the original intention of the addition of "Arts" into STEM was intended to refer to the "liberal arts" or "arts and humanities," it seems that few practicing classroom teachers or administrators embrace the nuances of this expanded emphasis, and the corpus of literature on STEAM rarely expounds upon the elongated definition.

Attempts at including the arts into STEM lessons almost perfunctorily take the avenue of creative artistic expression. As such, despite fears of "mission creep" watering down the original intentions of STEM by expanding its scope, it is readily apparent that as mandates, funding, and instructional planning remain focused on buzzwords and acronyms, emphasizing STEM subjects enriched by the Arts and utilizing Reading strategies (STREAM) can be a useful way to keep these elements in mind. In fact, we propose another step forward: "STREAMS" adopts an approach similar to the pedagogical integrations of STREAM. The integration of social studies into



STREAMS-based learning serves as a connecting thread that supports authentic engagement with a variety of topics. The Project Approach supports an interdisciplinary framework that allows children to engage with multiple content areas through intentionally designed integrated experiences.<sup>7</sup> Focusing not only on how things work, but how they have evolved over time and their role in our shared human experience gives STREAM-based learning activities a necessary grounding in students' lives.

### Connecting Through Food

This is the story of one project that connected children, families, and the community in a meaningful way. Following the student's interests, the teachers met weekly with the school's director to think about what the children were saying and how they could enhance learning. During these meetings the teachers and director carefully thought of ways to authentically embed science, technology, reading, engineering, art, math and social studies into the project. This story highlights the power, possibility, and joy of interdisciplinary work with young children, with an emphasis on social studies as the connecting thread that tied the project together.

In the beginning of the school year, teachers observed children talking about food and pretending to cook. Ms. Meaghan observed them "making cupcakes and food" when working with clay or Playdoh. During lunch, Ms. Eloah conversed with a group about the diverse foods that people eat. In dramatic play, they pretended to cook and serve food with their teacher, Ms. Cassidy.

To launch the project, teachers started a simple version of a web to discern what students knew about the topic and to find out what they wanted to know. When teaching very young children, the teacher can present a web as a large piece of paper with a circle in the middle with topics written inside of it. The children brainstorm what they know about the topic while the teacher writes down what is said on sticky notes or directly onto the paper. Throughout all the phases of the activities, children add to this web as they learn, facts and observations from each phase depicted in a different color of ink to demonstrate the growth of knowledge over time. The teachers noticed the students enjoyed talking about their experiences eating and cooking at home with their families. The teachers reached out to families, asking them to share photos of their families cooking at home. From conversations with children, it was clear they knew a great deal about the process of cooking and were eager to share experiences of cooking at home that were special to them.

“I make cookies all the time with my Manny and we add frosting and sprinkles and Momma cooks dinner; she cooks alfredo and I love it.” —H.F.

“I have watched shows about cooking ... So, they have grilling and cutting and so then my Mom taught me to cut with my fingers back.” —A.L.

“When you cook beans, you need to put them in the bowl with water and then let them boil to make them soft.” —V.M.

“I love to cook lasagna. You need cheese, noodles, and sauce. You cook it in the oven.” —A.P.

As children continued to discuss food, families were invited to come into the class to teach everyone how to make recipes that were important to them. The dishes included dumplings, *fasolakia*, banana pancakes, applesauce, smoothies, Trinidad macaroni pie, and bread. A mother joined the class to make *fasolakia*, a traditional Greek green bean stew. With students gathered around the table, she introduced each ingredient. “This is olive oil. What does it smell like?” she asked. “My mom’s perfume,” Evelyn replied. The children explored multiple content areas through the process of cooking and eating the *fasolakia*.

To prepare the food, ingredients had to be purchased, which required writing grocery lists for the teachers to take to the store. Children demonstrated early writing skills such as print copying and phonetic spelling as they wrote their lists. The experience of cooking with families engaged students in making use of their senses concerning the ingredients and their characteristics, including states of matter (solid, liquid, and gas). Alongside these observations, children were applying numeracy and measurement skills, as well as gaining knowledge of fractions. Through the act of cooking, they explored sequencing that supports emergent literacy skills. This contextualized math, science, and literacy in an authentic scenario that strengthened knowledge across content areas simultaneously.

Throughout Phase 1, students were able to connect their lives at home and school. The lessons clearly provided learning

opportunities in math and literacy through cooking and reading recipes. Also significant were the social studies embedded into the learning experiences. Children explored how people cook and share food, as well as what people cook in different parts of the world. (D2.Eco.4.K-2. “Describe the goods and services that people in the local community produce and those that are produced in other communities,” see **Table 1**) While investigating the different recipes, the teachers helped students identify what part of the world the food came from using a world map. Teachers put a picture of the food next to the country of origin to help visualize where the places were located for the food they were eating. Through conversations, many students realized that people sometimes eat similar things in different parts of the world. (D2.Geo.3.K-2. “Use maps, globes, and other simple geographic models to identify cultural and environmental characteristics of places,” and D2.Geo.6.K-2. “Identify some cultural and environmental characteristics of specific places.”) These rich conversations allowed children to connect to their personal culture as well as the cultures of their peers.

Although food and recipes are considered a somewhat clichéd entry point for social studies, we wanted to connect the project to lived experiences as a launching point into deeper learning. When working with young children it is considered best practice to bridge their personal experiences with their school experiences in order to enhance their investment and engagement with a topic.<sup>8</sup> We wanted to move away from typical themes of looking at food as a surface-level cultural exploration; that was not the point of our project. Rather, we asked families to choose their favorite dish, reflecting their personal idealizations of their home culture, without drawing the conversation to heritage. This was meaningful because, when children named a dish, it was often their favorite, and they were eager to share it with their friends.

### Field Work in the Community

Conversations shifted to the question of where families get their food. Children had many questions about this, so the teachers decided to dive deeper and pose the research question “How do we get the ingredients we need to make recipes?” Students began by connecting to lived experiences purchasing food from a store, and discussing experiences shopping at their local grocery store after a teacher took a video of herself shopping for one of the recipes they planned to cook in class.

Children decided they wanted to create a grocery store in the dramatic play center. The teacher recognized this was an ideal opportunity to engage in field work to develop deeper understandings about the elements of a grocery store before recreating one. There was not a grocery store close enough to allow for this experience as part of the school day. The teacher noted that on the university campus there is a weekly fresh market. Every Thursday tents are set up to sell a variety of products including fresh fruits and vegetables, homemade breads and

spreads, flowers, and other hand-crafted goods to the wider university community. The teachers decided that the market presented an opportunity for children to explore more deeply the places that sell food and to broaden their understanding of where families can buy food.

The market served as a source of information for understanding the elements needed to create a store. Sometimes, field work is required to build knowledge. During their first field visit, the children observed, interacted, and took notes of their experiences, while sampling available items. After visiting the hummus tent, they voted on which flavor of humus they wanted to purchase. They decided on the “Everything but the Bagel” flavor. One student, Hudson, was responsible for paying for products for the class. After working with the teacher to identify which combination of bills he would need to pay for the \$6 hummus, he took the money to the vendor, asked for the item he wanted to purchase, paid the bill, and accepted

the printed receipt. When Hudson brought the hummus back to the group, Mike suggested purchasing chips to go with it. The teachers guided Mike through analyzing the cost of the product versus how much money was available. The group had to decide if the purchase was in their budget.

After visiting the market, students’ wishes about transforming the dramatic play center shifted from creating grocery store to creating a fresh market. The class returned to the market to gather additional information, with students taking on specific investigative roles that would support their re-creation of the market. One group completed observational drawings of the tents with labels that would be used to guide design work. A second group kept count of how many signs they saw and what was on them. A final group observed the different ways people could pay (e.g., cash, credit card, check), which encouraged conversations of currency and technology.

“What kind of money do you have here?”— Mia

**Table 1. Standards Across Age Range (Preschool-First Grade) Addressed in Project (Florida Early Learning Standards, Florida Standards, and C3 Framework Benchmarks)<sup>9</sup>**

Project Element- Field Visit				
During the project children visited the market and purchased food items to bring back to the school and taste.				
Subject Area	Preschool Standard	Kindergarten Standard	First Grade Standard	C3 Framework Benchmark
Social Studies	VII.G.2- Begins to recognize that people work to earn money to buy things they want or need	SS.K.E.1.2- Recognize that United States currency comes in different forms.	SS.1.E.1.1- Recognize that money is a method of exchanging goods and services.	D2.Eco.5.K-2. Identify prices of products in a local market.
Mathematics	V.A.3.- Demonstrates one-to-one correspondence when counting objects placed in a row (one to 15 and beyond)	MAFS.K.OA.1.5- Fluently add and subtract within 5.	MSFS.1.NBT.3.4- Add within 100, including adding a two-digit number	
Project Element- Deciding What to Sell				
As children prepared for the market they would create they needed to decide what would be sold. All ideas were recorded in a list the children made with adult support, then the class voted to narrow to a few items that would be available at the market.				
Subject Area	Preschool Standard	Kindergarten Standard	First Grade Standard	C3 Framework Benchmark
Social Studies	VII.F.2- F2- Participates in problem solving and decision making	SS.K.C.2.3- Describe fair ways for groups to make decisions.	SS.1.C.3.1- Explain how decisions can be made or how conflicts might be resolved in fair and just ways.	D2.Civ.9.K-2. Follow agreed-upon rules for discussions while responding attentively to others when addressing ideas and making decisions as a group
Language	IV.F.2- Shows age-appropriate phonological awareness	LAFS.K.L.1.1- Demonstrate command of the convention of standard English grammar and usage when writing or speaking.	LAFS.1.L.1.1- Demonstrate command of the convention of standard English grammar and usage when writing or speaking.	



“I haven’t sold anything yet so I don’t have any money.” – Adult vendor

“No, how do we buy stuff here?” –Mia

“Oh, I take cash or credit cards if it’s over \$5” –Vendor

“What about coins” –Mia

“Coins a long as they add up to the right amount” –Vendor

Mia writes down notes about how to pay for the food at this booth.

This second visit to the fresh market provided exposure to real life economics, mathematics, science, literacy, as well as social interaction competencies. Children had the chance to see, smell, touch, and even taste produce, and to learn what products were made of. They voted on what they liked the best, and then purchased those items, applying mathematical knowledge by exchanging money and interacting with others within the community. In the meantime, some students were responsible for drawing, photographing, and documenting their experiences. This work was shared with the rest of the class upon return to the classroom. This process of sharing information further explored the sciences as well as language and literacy.

The experience of engaging in field work immersed children in the exploration of the market and allowed them the opportunity to work as part of a group as they each carried out specific roles that supported a larger vision of creating their own market. Embracing the civic notion that everyone’s voice matters when making choices for a group, they voted to select products to purchase. Through their interactions with the vendors, students made observations about the ways products are sold, customer interactions, and the process of buying and selling. These real-

world introductions to economics provided children with the opportunity to more fully contextualize other experiences that involve the transfer of money, goods, and services.

### Creating Our Own Market

Representation of children’s learning was the teachers’ primary goal as the project closed. Since this project focused on food and markets, the class decided to create a fresh market to showcase their learning. They started the process by choosing a name for their market. During circle time students suggested different names and, as a class, voted on their favorite. Together, children thought back to their cooking experiences and selected their favorite recipes—applesauce, banana pancakes, and smoothies. During the visit to the university market, students noticed that a variety of dry-good items were sold, not only foods. This inspired the creation of non-food goods for the classroom market, including necklaces, bracelets, and watercolor paintings that were added to the inventory. Students then determined prices for the products they were planning to sell.

While at the Market (in dramatic play), children were sitting on the counter acting out the role of the vendors. Ms. Cassidy brought in more cardboard boxes while Ms. Eloah prompted:

“I see that you guys are sitting on the tables when playing the vendor’s role. When we went to the fresh market last week, were the vendors sitting on the tables or standing behind the tables?”

“Behind!” –The class.

“Well, so we need to make tables that we can stand behind” –H.D. as he points to the boxes Ms. Cassidy brought in. “We can use these boxes as tables and put the tent on top!”

The teachers moved the tent, putting it on top of the boxes.

“This is great! This is great!” –H.D. as he positions himself being the table.

“The goodies can be up here.” He touches the top of the table. “Samples! Samples!”

Children used cardboard to make signs, including one with the market name and others with products and prices. On the day of our classroom fresh market, and with the help of teachers and parents, students cooked food, picked organic lettuce from our school garden to be sold, set up tents, displayed products, hung signs, counted money for change, and played some music. The entire school community was invited to come shop at the market. The students had the responsibility of talking to their customers to see what they wanted to purchase, pricing, and collecting money. Each child took turns carrying out various roles in the market throughout the day.

The process of building fresh market tents provided the opportunity to engage in engineering and artistic expression. Children were designing the tents by using different sizes of cardboard, testing their ideas while using tables and chairs as support for the tents, and problem solving during the pro-

cess of putting all these pieces together. This collaborative problem solving explores basic democratic principles and civic ideals. After building the structures, children created art pieces to decorate the tents and signs. Students created different jobs including salesperson, cashier, and delivery person, which provided them opportunities to learn more about identity development where they recognize individuals as responsible members of a group. It also gave them an opportunity to explore leadership roles. Families and students from other classrooms made purchases with real and play money. Students engaged in economics, first when pricing the products, then when manipulating money to receive payment and give back change. In their roles as buyers and sellers, children engaged in identity development as they worked through issues and negotiated their wants and needs.

### Project Adaptability

The Project Approach centers on connections to children's unique lived experiences, ideas, and skill levels. This project took place on a university campus where a farmer's market is organized by the student union. The choice to explore farmers' markets came about because the children could physically visit this site, while the area's grocery stores and markets were too far away for a field visit. It should be noted that this project could have centered on any place where food is bought and sold, while still exploring many of these same concepts. Projects should seek to highlight the resources of the community and the funds of knowledge that exist within it. As such, a study of a mercado or supermarket would be more appropriate for communities where these are accessible for children to study first hand.

Project work invites children to engage in inquiry at their individual levels, allowing for highly differentiated instruction. In early childhood settings, this adaptability supports the use of this approach in mixed age classrooms. Within the context of the market project standards, elements of the project could be modified to support children across primary ages. For example, when addressing the purchasing of food items, social studies standards can be taken into account as teachers discuss with preschool students the fact that we use money to pay for things we want or need to buy. Teachers can help kindergarteners to focus on identifying the units of money they need to make the purchase. First grade students will explore money as a means for exchanging goods and services (**Figure 1**, Standards and Activities, p. 27). The purchasing of food is a prime example of the interdisciplinary value of authentic learning, as math is naturally intertwined in this discussion. In preschool and kindergarten, counting out money supports standards that engage children in developing counting skills. For kindergarten and first grade students, the skills of addition are needed to total sums of money. Familiarity with standards will support teachers in identifying connections between content areas and developing opportunities for integrated learning opportunities that are highly differentiated, based on children's skill and develop-

mental levels.

### Conclusion

When reflecting on this project, we noticed the unifying role social studies played in creating authentic learning opportunities to deepen students' knowledge of the world. Throughout this project, social studies concepts supported and deepened engagement with a variety of other content areas, adding purpose and meaning to the experiences. Interdisciplinary frameworks create space to share and explore culture as well as include families as an active part of the classroom to develop meaningful connections. Through this study, the children engaged in STREAMS content that applied their real-life experiences to create joyful learning. The interdisciplinary approach led to a ripple effect in its development of closer connections between home, school, and community. 🌍

### Notes

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