



BISHOP McHUGH

REGIONAL CATHOLIC SCHOOL

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Bishop McHugh Blog



Students Tackle Real-World Challenges In Project-Based Learning

The fifth graders bowed intently over their desks, carefully threading the sharp needle through the colorful cloth. This was not a 'Home Ec' class; nor was this a project that would ever be sent home. Yet it was perhaps more meaningful because of it. The class was making quilts for children in the hospital, as part of a Project-Based Learning (PBL) exercise.

PBL is a teaching method where students are presented with a complex problem or question that exists in the real world. They must use the various disciplines in academics, from mathematics to language arts to creative and practical arts or science to solve the problem over an extended period of time. The projects are meaningful. They engage the students in a way that traditional academics do not. They simulate real-world experiences where we use all of our knowledge to tackle challenges around us.

At Bishop McHugh, each teacher was asked to develop a PBL Challenge for her class. This blog shares highlights from four of the classes to show the range and depth that the students are able to achieve using this teaching model.

It Starts With the Right Question.

Fifth grade teacher Laurie Moore learned about [Project Linus](#), an organization that makes quilts for critically ill children in the hospital. She had taken a quilting class over the summer, and knew how quilts incorporated lots of math skills, from measurement to calculation. She thought it would be the perfect PBL exercise for her class.



Every PBL starts with a question. The 5th grade question posed was, “How can we, as early learning quilters, make Fat Quarter Quilts for children in the hospital?”



They started each session with a quilting prayer, which incorporated religion. Mrs. Moore handed out the specifications from Project Linus. Her quilting partner, Beth Walls, came into school to help. There would be a boys’ quilt and a girls’ quilt, each measuring 34 by 42 inches.

Some students were excited; others were wary. “At the beginning, I thought, oh no, I don’t want to learn to sew,” said Matthew Kemenosh. “But

then we got going, and I really liked it. Not only is it fun, I think this is really special, making things for other people and especially kids in the hospital. It makes me feel really good.”

Maggie McMahon had sewn before, so that part wasn’t new to her. “I think this is very special because hospital rooms can be really boring,” she said. “These blankets will really help to cheer them up.”

“I always thought my mom would be the one to teach me to iron, but I learned at school,” said Shane Klemick half-jokingly. But this astute young man summed up the meaning behind the project on a more serious note. “We’re making sure that these kids are comfortable and warm when they need that most. Every stitch we make is made with love.”



Protecting Our Water, A Precious Resource



During a school-wide recycling assembly, teacher Mary Kate Gleason was inspired to create her class PBL question. She saw an example of a rain chain, a device that could capture rainwater so it may be recycled and reused. The [Cape May County Municipal Utilities Authority](#) (CMCMUA) was holding a contest, the Creative Recycling Initiative, for rain chains made out of recycled materials.

Ms. Gleason thought it the perfect challenge for her class. So she asked, “*As an engineer, how can we use mathematical and scientific thinking to create a rain chain?*”

The second graders dove into the project enthusiastically, starting with designs on paper. They worked with partners, which developed their teamwork skills. The designs were intricate, involving counting and measurement. Once approved, the next step was building them. Parents volunteered to come in during several sessions to help.

Recycled bottles, cans and other material poured in daily, as students piled up a collection of what they would need to build their rain chains. It was getting to be a habit to save those empty bottles from lunch for the projects.



Paige Essig and McKenzie Palek worked together on a design. “We used 10 cups, 3 bottles, a piece of wood and two buckets,” said Paige. Said McKenzie, “Some people throw these in the trash, but this isn’t trash; it’s recycling.” Both girls agreed that it’s very important to reuse and recycle. “Not only are we collecting water, we’re doing it in a way that is good for the environment,” they said.



The Game of Life: Is It Fair?

Teacher Darla Morinelli posed the ultimate question to her seventh grade math students: “*Is life fair?*” The PBL query would challenge them to answer by exploring the concept of probability.

They started out with games of chance. Mrs. Morinelli used bags with colored blocks, and the students took turns guessing which color would be chosen by knowing how many of each color were in the bag. Then, they played

games like Rock, Paper, Scissors, and calculated the different outcomes.

The culminating project was to work with a partner or small group to create their own games, which incorporated the concepts of probability. They would also have to develop a PowerPoint presentation to “sell” their game to an expert panel, in a similar way to Shark Tank on television.



The students learned quickly that creating a game wasn't necessarily all fun and games, or even easy. "We started with a different game but we changed it when it wasn't working," acknowledged partners Cassidy Hendee, Caitlin Beaulieu and Emily Pasceri. Now the group is pleased with "Million Dollar Move," which incorporates addition, subtraction and money. Sam Burns and Jamie Butler also thought about doing a game around the movie, the Sand Lot, but instead changed to a concept called "Equation Invasion." "It was easier to make it a math game, since it had to have math in it," said Sam. "The age range is third grade and up," added Jamie, who noted that they had to be careful about the level of questions they included. Carter Ensley and Yiannis Kossyvakis created a "Snakes & Elevators" game, which teaches negative and positive numbers. "It was a lot more fun than doing math from a book," said Carter who enjoyed coming up with the concept.

For more information about Project-Based Learning at Bishop McHugh, email Principal Tom McGuire at principal@bishopmchugh.com.