

**John F. Kennedy Magnet School
Port Chester UFSD
Port Chester, New York**



Kids as Scientists: Awakening Curiosity

Mary Ellen Onofrio, Science Lab Coordinator

I think kids need to learn early on that anyone can be a scientist. So one of the first things I do with the first graders is to have them draw a picture of a scientist. I do see the pictures of Einstein-looking people and almost like magician-like people. So after everyone shows their pictures, I give them a mirror and ask them to look in it and remind them that they can be scientists, too.

Most of the districts that do have a science lab or have a science lab teacher in the elementary level are the wealthier districts, and we're certainly not one of those. It's been a focus and a very strong point with all of the administrators that have been here. Central office really supports it.

We start them early on teaching them the scientific method—where you have question, you develop a hypothesis, you carry out a plan, you collect data, you analyze data, and draw conclusions. And that's a current that goes through every year. By fifth grade, we don't even have to mention it, that procedure.

When the kids are introduced to circuits; we're probably a month into it now, we just hand them out batteries and bulbs and wires and we'll give them time to mess around. Time to explore and see what they come up with. That light bulb lighting up? Very literally lighting up? It's just an awesome look on the kids' faces.

So some of the kids will just make a lot of discoveries on their own that we don't even have to be involved in, and then I'll structure things more. I'll tell them I want to add a switch, and I'll give them a procedure to follow. Later on, we might move to something that, given these materials, can you make this motor work? Now that you did a light bulb, can you add a motor to this circuit?

The final step would be, "Okay, so now we just built a series circuit. What happens if one light goes out?" the other one does too. So this is leading into parallel circuits that I'm going to be teaching them about next, but I wanted them to try to solve that problem on their own, so here I'm giving them the opportunity to [ask]—"Okay, what are we going to do about this? This is not working, always. This does not always come in handy; it's not always the best route, so where do you go next?"

So it's much more open-ended for the kids to kind of solve on their own. And they'll meet with their teams, you know, next week, and talk about it. I'm giving them a week to think about it, and they'll talk about it and try to come up with a plan before I actually, you know—I may or may not have to give the answer to them.

I teach the kids from early on that math and science are first cousins because they're always integrated. Our math program integrates labs that are very sophisticated and follow the scientific method, and if you follow the scientific method, you're naturally including math in the process.

Lou Cuglietto, Principal of JFK Magnet School

Science is an excellent content area to help children learn their vocabulary, help children see the world in a much different way, through a different lens. And also it's just fun for the kids.

Mary Ellen Onofrio

This was just an interesting, kind of cool thing that happened. We added to our building; we added a new wing that created a courtyard. I remember thinking, "We need a garden." It's like the perfect spot because it's enclosed.

We sought some grants and created a garden. Last year was really our first year, so we're still very much a work in progress with our school garden. We have three vegetable beds that are beautiful, raised stone beds.

We have a garden club, and the kids are chomping at the bit. As soon as we get a warm day, they want to know when we're starting again. Usually around the first or second week of May, we have our planting, and the kids have a say in it; we've chosen our seeds already. We plot it out, we make sketches before we start, and then planting day arrives.

Since it's a new project that we just really started last year, we're still in the beginning stages of doing all the planning, but there's a nutrition component that we're working on; we've have dieticians and nutritionists come to the school. We've submitted grants for a greenhouse, so we can do some around-the-year gardening. I think if we had a greenhouse we could do a lot more, maybe sunlight and water—it's still in the beginning stages of thinking, but there are so many ways to go.