



As part of 'Take Your Daughters and Sons to Work Day,' the children of Fermilab became investigative journalists in search of what a career in science is really like, and what it takes to be a full-fledged scientist, engineer or technician. On the pages of this special edition of *FermiNews*, the children summarize their interviews with Fermilab employees and reflect on their day at the Laboratory.

The Children of Fermilab Explore Careers in Science

The children held two separate press conferences on the 15th floor of Wilson Hall. In one room, Roger Dixon, head of the Research Division, and Cathy Newman Holmes, from CDF, answered kids' questions. In the second conference, Wyatt Merritt, of DZero, and Sharon Austin, a technician in the Research Division, handled the questions. Kevin Bock, 10, and Cristina Rodriguez, 9, took the photographs.

Fermilab. All I can say is, Wow, what a place! My day was very exciting. I would like to work here in the future. Roger Dixon and Cathy Newman Holmes are both very lucky to work here. Roger has been here for about 20 years, and Cathy for about 13. Fermilab is a very special place. People from all over the world come here, of different races and genders, and scientists work here. That's great! Fermilab is a wonderful learning center. Like I said before, my day was exciting. I ate a good lunch, I was a journalist for a day, and I spent time with my mom. I helped her send faxes and do the mail. I even answered her phones! My mom was glad I came. She needed my help. Fermilab has all sorts of animals and fun things to do. I got to see baby geese. I saw deer, buffalo and more. Fermilab even has a swimming pool, tennis courts, basketball courts and a little bar with pool tables. On a nice day you can ride your bike on the bike path. You can swim, even fish! Fermilab is a lot more than just people on the phones, or people working at the computer, or people studying. There's so much more. Fermilab is a great place. I definitely would love to work here, no doubt about it. And if you think it's hard to work at Fermilab, well, straight from Roger Dixon's mouth: "Nothing's too hard if you truly enjoy it."

—Niki Lopez, 14, 8th grade, Batavia Middle School

Photo by Kevin Bock



A couple of Fermilab science journalists writing their stories about their day at the Laboratory during "Take Your Daughters and Sons To Work Day."

Roger Dixon, head of the Research Division, and Cathy Newman Holmes, who works at the ring, are top technicians at Fermilab. Roger has been working here for

FermiKids Discover Life in Science



Photo by Fermilab
Visual Media Services

20 years, while Cathy has been here for 13 years. Roger, who works on the 8th floor, helped to complete the construction of the electromagnets. Cathy, who used to work on the 15th floor, attended the University of Chicago. Currently, Cathy is monitoring proton-antiproton collisions. Roger is busy managing numerous projects. They both were inspired at a young age by relatives. Both of them enjoy their work greatly.

—**Pat McCluskey, 12, 6th grade, Winfield Middle School**

It's hard to be a scientist sometimes. Scientists can have problems like us. Scientists can study anything. Cathy and Roger are scientists. Cathy was confused when she started being a scientist. Roger and Cathy are studying very small things. I think it's neat being a scientist because you get to study a lot. I hope I can be a scientist.

—**Katherine Sharonov, 8, 2nd grade, Geneva Harrison Street School**

Hi. I interviewed Roger Dixon and Cathy Newman Holmes. Here were the questions that we asked Roger and Cathy: Cathy and Roger are both scientists in physics. They both are working here. We asked them how they felt about being a scientist. They said they liked it. How hard is it to be a scientist? Well, they said it is

hard but sometimes it is fun. How long have you worked here? Well, Cathy said she worked here for 13 years. Roger said he worked here for 20 years. Who inspired you to become a scientist? Roger said his grandfather, and Cathy said her teacher. If you are wondering about what these scientists study, they try to find out what everything is made of. Do they get to be in the room when the antiprotons hit each other? No, they don't, because it is too dangerous. Were they ever confused when they were a scientist? Yes, they were. Cathy works on the big detector. Well that's it for now.

—**Jyoti Shenai, 11, 5th grade, White Eagle Elementary School**

"I was inspired by my grandfather." That's a quote from Roger Dixon, a Highland and Purdue University graduate who is now working at Fermilab. Roger has been working here for 20 years. Thirteen of those years he's been working with Cathy Newman Holmes, a graduate of the University of California. Roger and Cathy both started out their science careers in places other than Fermilab. Roger once worked at Argonne, and Cathy once worked in Europe, and once on the Crystal Ball [Detector] in California, until it was shipped off to Germany. Cathy now works on collider experiments. Cathy and Roger

Scientists in action!
A look at the Main
Control Room for
Fermilab's accelerators.



Cathy Newman
Holmes of CDF. (Photo
by Kevin Bock)

Kids as Science Journalists



Roger Dixon, head of the Research Division. (Photo by Kevin Bock)

agree that it's not always fun being a scientist, but in the long run it all turns out okay. Cathy and Roger have met many famous people in their profession. Cathy and Roger have both met many Nobel Prize winners, and Roger has even met [actress] Sally Field's brother Rick [a well-known high energy theorist]. Cathy and Roger's careers have brought them to many corners of the earth and connected them to famous people; but when it's all over, they're both glad to come back to good old Fermilab, Batavia, Illinois, USA!

—**Vincent M. Moretti, 13, 7th grade, O'Neill Middle School**

Did you know that some scientists at Fermilab smash protons together? They have a machine where protons go in one direction and antiprotons go in the other. Scientists at Fermilab try to understand what happens after the protons collide. If you were in the room when the protons collided — it would be very dangerous — you couldn't even see the protons! Imagine you were a scientist and you were building a machine. Engineers would design the machine. Then you would start building it. When you finished building it, you could try the experiment — if it was safe — that you and others were planning.



Photo by Cristina Rodriguez

More of the FermiKids taking notes during their press conference.

At Fermilab it is very fun and exciting. I hope you learned a lot about Fermilab.

—**Neeta Shenai, 9, 4th grade, White Eagle Elementary School**

I like Daddy's work.

—**Beth Sharonov, 6, Kindergarten, Geneva Harrison Street School**

Roger Dixon and Cathy Newman Holmes work at Fermilab. Roger is the head of the Research Division. Roger went to school at Purdue University, and Cathy went to the University of Chicago and the University of California. Cathy has been working here now for 13 years, Roger for 20 years. Roger's biggest accomplishment was that he got to build supercollider magnets. Cathy has also been to interesting places such as Geneva, Switzerland, and DESY in Hamburg, Germany. Cathy does high energy accelerator collider experiments. The biggest disaster was when superconducting magnets blew up. Roger and Cathy both answered questions well and were really lots of fun. I learned a lot and had a good time.

—**Yosh Martinez, 11, 6th grade, Greenman School**

Today was Take Your Kids to Work Day. I spent most of the day in my dad's office. The most fun thing I did all day was attend a press conference. I personally hope I can come again: I thought it was different.

—**Michael Johnson, 11, 5th grade, Western Avenue School**

The scientist I interviewed is very nice. She answered all the questions very well. She likes her job a lot. She always has fun, and thinks her job is exciting. She also has two kids. I would like to thank her for her time.

—**Kevin Billenstein, 12, 6th grade, Francis Granger Middle School**

This morning my dad took me here so I could see what he does at Fermilab. He taught me how to use the computers and how to print out a draft. We explored the buildings, and I learned more about what

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Photo by Cristina Rodriguez



Marianne Bossert, deep in thought, writing her story at “Take Your Sons and Daughters To Work Day” at Fermilab.



Wyatt Merritt of DZero. (Photo by Cristina Rodriguez)

everybody does here. After lunch, I came to interview the scientists. I learned a lot about the experiments that the workers at Fermilab perform. I think it would be fun to be a scientist, even though I wouldn't want to.

—**Erin Arnold, 13, 7th grade, Thompson Middle School**

I will tell you about two people who are scientists at Fermilab. They are Cathy Newman Holmes and Roger Dixon. Roger started going to school in New Mexico, and Cathy went to school in California. Roger was inspired by his grandfather, who only went to school until the second grade, but managed to teach himself physics. Roger has worked at Fermilab for almost 20 years. He has to work out many math problems. The experiments Fermilab does are to smash protons and antiprotons together to see what happens. Roger works on the 8th floor of the Highrise. He doesn't think his work is hard, because he likes it. He thinks his work is mostly fun, but not always. Cathy made a late decision on what she wanted to be. She didn't know until she was in college. She thinks her work is hard, but, like Roger, she likes it. Scientists at Fermilab aren't able to be in the room when protons and antiprotons collide, because of the dangerously high level of radiation. They get to watch with computers and detectors, though. Cathy has been working at Fermilab for 13 years. She used to work on the 15th floor of the Highrise, but later moved to a trailer. Both Roger and Cathy are physicists, and since

they have been working at Fermilab, they have had very good reputations. They are known as very good people.

—**Marianne Bossert, 10, 4th grade, Goodwin School**

Sharon Austin is a technician. She says it is very fun. A single crystal costs \$6,000,000. Sharon takes courses 2 times a year. She taught 2nd grade for 5 years. She made a tiny detector. Sharon grew up in New York State, and then she moved to Batavia, Illinois. Wyatt Merritt is a physicist. She works in the big blue building [DZero]. It took her 7 years of school after college to get her Ph.D. She wanted to be a physicist since she was in 8th grade. It's always a challenge. She got straight A's in school. She grew up in South Carolina. She has a few dogs and cats. She's worked at Fermilab for years.

—**Rebecca Lundy, 10, 5th grade, Fovally Montessori School**

Emily Alcorn (E.A.). - How long did it take you to get your Ph.D.?

Wyatt Merritt (W.M.). - 7 years. I went to Cal Tech in Pasadena, California.

E.A. - Do you like to write computer programs?

W.M. - Yes. My favorite part is that it is so challenging and exciting.

E.A. - Did you get straight A's in college?

W.M. - Yes, mostly A's.

E.A. - Where did you go to high school?

W.M. - I went to Lakeside Junior High School.

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E.A. - Where did you grow up?
W.M. - I grew up in South Carolina. I moved to California in 1973. Then I moved to Illinois in 1980.

Sharon Austin

E.A. - How long did it take you to get your master's?

Sharon Austin (S.A.). - 4 years for my bachelor's and 2 years for my master's.

E.A. - Did you get straight A's in college?

S.A. - About the same number of A's, B's and C's.

E. A. - Would you want to bungy-jumping off this Fermilab building?

S.A. - I have never considered it, but yes.

E. A. - Where did you grow up?

S.A. - I grew up in New York State. After that I moved to Illinois.

—**Emily Alcorn, 11, 5th grade, Fox Valley Montessori**

During my visit to Fermilab I interviewed two people. The first person, Wyatt Merritt, is a physicist and a technician. She got her Ph.D. at Cal Tech in Pasadena, California. She likes her job writing computer programs.

The second person, Sharon Austin, is a technician. She makes and builds things. She also works with crystals, looks at particles, and works with detectors.

—**Ryan Hively, 11, 5th grade, Freeman**

I saw a magnet for the new [Main Injector] ring. I saw some buffalo. I saw a map of Fermilab.

—**Sean Skweres, 7, 1st grade, Ashton 1 Grade School**

I saw and heard a lot of things. I saw some magnets, and I was able to help my dad in his office. I liked all the people who helped me understand Fermilab. I think some day I will work here and build some magnets and devices. Thank you !!!!!

—**Lauren Coleman, 10 1/2, 5th grade, Ashton Grade School, IL**

There are many great things at Fermilab, [supported by] the United States Department of Energy. There are many different kinds of animals at Fermilab. One of Fermilab's workers says that she sees all types of animals run past her window. Fermilab has a great number of buffalo, which are an endangered species. Buffalo were, and still are, being hunted and skinned; their furs are usually sold on the black market for a lot of money. Fermilab also has coyotes and deer. Coyotes are endangered because they too are hunted for their fur. Deer are not endangered, and yet they are still hard to find. Normally they're hunted for the skin and meat on their bodies. There are many other types of animals at Fermilab, but I just don't think they're as important as those main three. If you ever get the chance, stop and think about how Fermilab's saving some of the world's greatest endangered species.

—**Brandon Billenstein, 14, 8th grade, Granger Middle School**

During my visit to Fermilab, I learned many things about what they do here. I also got to visit the linac [linear accelerator]. Anyhow, the two people I interviewed were Wyatt Merritt, a physicist, and Sharon Austin, a technician. Wyatt Merritt is one of the people working on the DZero experiment. Specifically, she's rewriting the computer programs.

Photo by Kevin Bock



Sharon Austin talks to one of Fermilab's science journalists.

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Sharon Austin works with scintillating fibers.
—Cameron Clark, 12, 6th grade,
Clinton Rossette Middle School

Roger Dixon, head of the Research Division, and Cathy Newman Holmes came in for the kids who came to Take Your Sons and Daughters to Work, and so a bunch of kids sat down and interviewed them. So you like working at Fermilab? Roger: "Yes, I like working here." Cathy: "It's one of the places you can get away."

How long have you worked here? Roger: "Nineteen, it is coming to 20, years." Cathy: "It is my 13th year."

Do you have any problems? Roger: "Yes we have problems." Cathy: "We have a lot of problems."

What inspired you to be a scientist? Cathy: "When I was your age, I didn't know I wanted to be a scientist. I thought science was for boys." Roger: "I learned some stuff from my grandfather; he was my inspiration."

Are you allowed in [the experimental halls] when atoms are in action? Cathy:



A look at the newest *FermiNews* photographers: Kevin Bock, 10, and Cristina Rodriguez, 9.

"No." Roger: "They don't make noise and you can barely see them."

Do you like being a scientist? Roger: "Yes, I do." Cathy: "Yes."

Were you ever confused? Cathy: "Never! Well, yes, sometimes."

How much money do you make? Roger: "Not enough! Well, not as much as Michael Jordan!"

—Lisa Tassotto, 11, 5th Grade,
Johnson School, Warrenville

"Great. I've been here 16 years," said Carl Lundberg, when I asked him if he liked his job. I asked John Chapman if he wanted to cut the [Foucault] pendulum off, or go bungee-jumping off the Highrise, he said no, but Wyatt Merritt said she'd push the ball any day. Sharon Austin told me she wanted a fire-pole on the emergency exit to slide down on. Ray Fonseca and Susan Swanson want to bungee-jump off the top of the Highrise together.

Most people like to work at Fermilab. "It's a nice place to work," said Heather Sveebeck.

—Kaya de Barbaro, 12, 7th grade,
Hill Middle School

Being a photographer was a lot of fun, and I think that I would like to do it again. For being a photographer I used a special camera that plugged into the computer. It was very much fun to do what I did. I hope next year I do it again. I learned a lot of stuff.

—Cristina Rodriguez, 9, 4th grade,
Goodwin, North Aurora

I came here because I didn't want to go to school. When I grow up I want to be a scientist. I think it will be exciting to be a scientist...

—Kristan Arnold, 8, 2nd grade,
Richmond, St. Charles

Roger has worked at Fermilab for 20 years. Cathy has worked here for 13 years. They both like working at Fermilab, because they like doing experiments. Their biggest accomplishment was to build the superconducting collider magnets. To be a

Kids as Science Journalists

Photo by Cristina Rodriguez



The “Kids as Science Journalists” press conference in full swing.

scientist, math is very important.

—**Tashio Martinez, 9, 3rd grade,
Greenman School, Aurora**

Being a Fermilab photographer is very interesting. You get to walk around taking pictures of scientists, and kids learning and writing. Using digital cameras and putting pictures directly onto the computer can be quite interesting as well. It is very nice to know you are also helping to produce a web page and the FermiNews. It is also nice that the kids and scientists keep working so it looks like they don't notice you, and looks like a more realistic picture.

—**Kevin Bock, 10, 4th grade,
Harrison, Geneva**

Sharon Austin is a technician at Fermilab. She said that she works on scintillating fibers that cost \$6,000,000 dollars. Sharon wants to go bungy-jumping off the Highrise.

—**Collette Kuk, 8, 2nd grade,
Annunciation**

9:05 I visit my mother's office and visit the web-site of the University of Chicago to find information about Enrico Fermi that I need for a speech for school.

10:30 My mother takes me to visit her closest friends.

11:30 My mother and I go have our deli-

cious lunch at the Highrise.

12:00 I help two other people plant a tree.

12:30 I come late to interview Roger Dixon.

1:30 I'm looking forward to the cryogenics demonstration hosted by Mike Urso. P.S. I appreciated the people taking time off their work to show me Fermilab. I really have had a great day. I hope I can do it again.

—**Alex Finstrom, 10, 5th grade,
Freeman Elementary, Aurora**

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INFORMATION ABOUT "TAKE YOUR
DAUGHTERS AND SONS TO WORK
DAY" AT FERMILAB!**

A form of this publication also appears on the World Wide Web. The address is:

http://www-ed.fnal.gov/FermiKids/front_page.html