



The INSIDER'S  
Guide to  
IISME

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*A collection of wisdom and inspiration from the 2004 Summer Fellows*

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## That Old Familiar Feeling...



Remember what that first day of school felt like?

*Remember the nervousness and excitement you felt as a student? The first day of school, getting to know your new teacher, learning new procedures and struggling with new concepts for the very first time? These IISME Fellows share what it felt like to work in an environment so different from their classrooms. For many, the Fellowship helped them empathize with the feelings their students must experience on a regular basis.*

“When I first started the Fellowship, I was definitely nervous. I knew that the project I’d be working on would have a lot to do with writing, but once I started reading the reports, I realized there would be a lot I’d have to learn, too. Even though I have a lot of friends who are scientists and are involved in various research projects, I only had a vague idea of what went on in laboratories. At Roche, I was presented with a very different set of materials than I’m used to working with, and I experienced a lot of the confusion my students must experience when presented with something totally new.” **–Kristy Garcia**

“...the greatest benefits for myself came from the bigger picture. By interacting with men and women in a professional business environment, I was gaining a lot of confidence in my interpersonal skills and in my ability to communicate about what it is I do in the classroom. By participating in a business, instead of a public education environment, I began to view the greater social and cultural context of education and my part in it. By putting myself in the position, once again, of being a learner (What’s a database? What’s a proposal?), I was seeing my own teaching through the eyes of my students. I was growing. I loved it.” **–Adrienne Van Gorden**

“By the time the Fellowship had finished, I had written a paper that was as researched and poured over as any term paper I had written in University. I was right to be excited about doing this Fellowship; my chance to publish in my own small way for a global audience took me through the writing process that I teach my students every year. It gave me a new appreciation for what I expect of them, and I look forward to sharing my work with them this year as I teach this process again.” **– Jen Morris**

“As I sit here alone in a very quiet cubicle, I have the perfect chance to reflect on my summer Fellowship with IISME and Silicon Valley Bank. I cannot believe that almost seven weeks ago I was just beginning this new journey. I was scared! Would I have enough skills to work in my Fellowship? Was I going to be able to contribute? Were the people I worked with going to be caring? Helpful? Approachable? All of these things entered my mind, which got me very nervous about my first day. IISME has given me the challenge to learn new things, to meet new people and to test my skills. It has empowered me to become more of a leader at my site and share my experiences with others. I feel refreshed and excited to go back to school and I am thrilled about

presenting my ETP to my staff. Participating in IISME was truly a rewarding and educational experience.” **–Ann Hines**

“This summer I became a student. As a Fellow at Lockheed Martin, I was expected to tap into skills and knowledge that I haven’t resourced since college. My work consisted of plotting graphs and editing diagrams of laser test results. This work required me to reacquaint myself with MATLAB. Instead of solving problems where I already had a problem solving strategy and an approximate answer in mind, I was handed tasks where I didn’t understand what the problem was asking. Like a student, I reviewed programming books, used notes from similar tasks to guide my train of thought, asked neighboring engineers and college interns for help, and figured things out through trial and error. The experience humbled me and reminded me how my students feel when new, abstract concepts are introduced.” **—Lindsey Mar**

“One surprising benefit I gained from my summer Fellowship was the ability to sympathize with struggling learners. For the first time in a long while, I found myself struggling. I often needed help to continue to the next step. I occasionally needed to ask the same questions multiple times. I felt awful doing so. This is what some of my struggling learners must face daily. I return to school this year with a newly found respect for these students. I hope my experience will help me to reach out to these students and help them gain more confidence.” **–Tania Vong**



## Cube Happy!

*For some, feeling comfortable in corporate culture took some getting used to.*

“For the past eight weeks, I’ve been part of an environment that is very different from my teaching life—a cubicle instead of a classroom, a cafeteria instead of a snack bar, reports on compounds and assays instead of five-paragraph essays, department meetings instead of staff meetings, leaving empty handed at the end of the day instead of piled down with papers to grade. Working at Roche has been a great experience because it has given me a much different perspective on teaching, or, more importantly, on what my students should be learning and how I should frame my teaching to make it more meaningful to them.” **–Kristy Garcia**

“My first week of re-acquainting myself with sitting and interacting with a computer for eight hours straight was the most agonizing. I quickly came to appreciate the demands of teaching, especially the opportunities to constantly move on my feet and interact with others.” **– Kathleen Chau**

“Having nothing to compare teaching with all this time, I was secretly yearning for the corporate lifestyle I had heard so much about. Would I participate in a power meeting? Power lunch? What was life like in a cubicle? Unlimited water and bathroom breaks? Was it true that I could talk with fellow co-workers any time I wanted? This contrasted significantly with teaching. A neighbor of mine enlightened me about IISME and I realized I could participate in this alternative lifestyle for the summer.

Now that I have finished my corporate run, I now appreciate what workers do in both the private and public sector. Now that I have a taste for life in the high tech world, I am anxious to go for another run next summer with another company and see what new worlds I can encounter. On the other hand, although I know I have a hectic school year ahead as the technology teacher in a middle school, the experience I was provided with this summer at Stratex provided me with more confidence as a teacher; I can honestly say to my students that I know what it is like in both worlds.” —**Parker Kelly**



## Reflecting on Your Own Practice

*Sometimes it's the intangible benefits of an IISME Fellowship that cause teachers to re-think their approach to teaching.*

“Through IISME, I was placed with United Defense, a government contractor. I was given a packet of information, which seemed rather vague at the time as to its intent, and from this packet, I had to find my boss’s name, the address of my office, how to set up an email account, a phone line, and a myriad of other tasks. Once I found my office and greeted my boss, he gave me a quick tour of where the bathroom was, introduced me to other people I might need to know, and then plopped me down into a cubicle with some books, and said, “See what you can do with this.” It took the entire time I was there to begin to appreciate the workload my boss had, and how my summer job played a small role in his overall agenda. I sought out opportunities to make myself noticed, talking with my neighbors and learning what resources they could be to me in the future. In addition, I had to seek many answers in order to perform my work, from colleagues and also from extensive online research. My boss was concerned about two things: “Did it work?”, and “Are you keeping to the schedule you outlined on the first day?” Everything else was inconsequential.

I know that by being a conscientious teacher, daily assessments are critical to student learning. However, I now wonder if I am doing my students a disservice by keeping them on task all of the time. When they go to college and have their first job, nobody will be looking over their shoulder all of the time; they need to learn how to work independently of me. One of my goals this year has been to find ways to take the center of learning away from me and place it more in the hands of my students. This I hope to accomplish through various project-based learning activities. Students will acquire researching skills and have to rely on their group members in order to succeed, skills that were paramount to my survival over the summer at United Defense.” – **Clint Johns**

“In addition to relating to and sympathizing with my students, there were many benefits from my Fellowship that I will bring back to the classroom. I witnessed several real-life applications of classroom graphing and algebra lessons that I can’t wait to share with my students. Most of my students find graphing tedious, useless, and can’t imagine how it will be useful outside of their homework. This summer, I spent the majority of my time analyzing test data with MATLAB. Each data set had several hundreds of thousands of entries collected over a ten-to twelve-second period. Without graphs, identifying patterns and comparing real data to the expected results would be an overwhelming task. I also saw technology in action. My mentor took me to the high bay several times to watch the part testing and combining test components. The importance of neatness and precision was reiterated several times during the laser testing. People handling the laser’s mirrors wore gloves, masks, and special suits. Any contaminations or impurities could distort the reflection angles with horrendous results.” —**Lindsey Mar**

## There’s More to It Than the \$7,000...

*Nobody gets rich on a teacher’s salary. The financial gain is an attractive feature of an IISME Summer Fellowship, but as these teachers found out, you will gain much more than anyone can put a price on.*



“As I sit back and reflect on why I decided to be part of IISME, I can recall a process that has helped shape the teacher I am today. I received a flier about IISME’S Summer Fellowship Program in one of my school’s staff meetings. I thought it would be a good way to earn some much-needed income during the summer. As I found myself going through the application process I realized I was learning already. I received feedback on how to make my application stronger. I also received a packet in the mail filled with course offerings to make me a better candidate by taking some computer classes. IISME’s support was very present in every step of the way and continues to be today.” – **Maria Reyes**

“IISME has been a valuable networking opportunity for me. I have met many teachers through this program who are enthusiastic about educational technology, and I still keep in touch with several of them. Our weekly teacher meetings at various companies in San Jose were most enjoyable, for I have never seen such intellectual commerce before in my life. I am still amazed at how the research I learned as a computer scientist in college translates into industry with cutting edge technologies that make living ten years ago seem unthinkable and unbearable compared to living conditions that we now enjoy.” – **Clint Johns**

“When I first walked into orientation on Friday, June 18<sup>th</sup>, I did not know what to expect. I had just come back from my two days of summer vacation, and I was not looking forward to going back to work so soon. This was my first IISME Fellowship, and like

many teachers, the idea of getting paid professional development and not having to teach summer school for much needed income attracted me to the program. I was hoping the orientation would only last an hour, two at most. I pictured a bunch of teachers sitting in a large room and listening to not-so interesting lectures all day. Instead I was pleasantly surprised with the activities, information, and support we all received that day. The only boring part of that day ended up being my two-hour commute home.” --**LaShauna Foster**

“As part of the Networking Group, I helped with the filming and editing of a video showing teachers becoming acclimated to the wealth of networking resources available at Intel. I learned to use NetMeeting Outlook and Video Conferencing software, hand-held devices, pagers and interactive cameras. I also became familiar with Adobe Premiere software and learned about functions on my camcorder that I didn’t know existed. Overall this summer was a great professional development experience and I walk away from it with valuable knowledge and skill in new technologies.” – **Kim Harms**

“Intel allowed me to experiment a lot with data manipulation and increased my confidence in introducing this topic to my students. Visual Studio provides some very simple tools for connecting to data sources and exposing data tables. With this experience, I will easily be able to introduce all my students to basic database design and use with relative ease. This was always daunting to me before I had the chance to put a lot of time into understanding some simple ways to use data to expose computer science principles. As veteran Fellow I am always amazed at how much I can learn when I am put into an environment where a lot of people are working on the same level. This is almost impossible to create in a school situation where I am usually the only one implementing my curriculum. Intel helped me take my knowledge and skills to the next level and the benefits to my students and school will be felt for a long time.”—**Sean Morris**

“I found a flyer, carelessly left on a dusty corner table in the staff room, from IISME. The \$7,000 part caught my eye first, and I’m not ashamed to say so. I had never considered teaching to be a semi-voluntary position. I want to earn money and own a house, too, just like most working professionals. After two years with IISME, the difference between who I am as a teacher now, compared to who I was just two years ago is significant and worthy of reflection. Now I am integrating my experiences in the business world with my experiences as an educator into a new perspective of education and of myself as an educational leader. Most recently, I have begun to look into Ph.D. programs in education departments at local universities; this gives me something more to strive for as I enter my classroom again this fall. I am excited!” —**Adrienne Van Gorden**

## I KNEW There Was a Reason For All That Teamwork Stuff!

“As I observed daily activities, I noticed how critical it was for people at Genentech to work as a team. Each person had a job to do and if any job wasn’t done right, the whole project suffered. I decided that teamwork skills were something that children could start working on at a very early age. I felt very excited as I wrote lesson plans for teamwork to be used throughout the following year in my classroom.” – **Karen Giehler**

“I knew my biggest challenge would be relating my experience to my educational transfer plan. I couldn’t see how creating user documentation could be useful in a middle school math classroom; however, I quickly learned that the NUMMI environment offered so much more. The collaboration between the team members and managers and the decision-making processes that the employees participated in were very inspiring. Meeting rooms were readily available when needed and it was not until a general consensus was reached by all those involved that a project moved to the next level. Plans are thought through, and everyone is involved in the decision making process. Everyone has a voice.” –**LaShauna Foster**



## But I’m Not a Math or Science Teacher!

How does a Middle School Humanities teacher survive in a math and science environment? Most Fellowships posted early on the IISME website had a heavy emphasis on technology and science skills... both of which were not appealing to me, nor in my skill set. Imagine my delight upon uncovering the Fellowship at the Oracle Education Foundation: executing the writing process to develop the categories for their ThinkQuest.com October 2004 website competition. My job

required a constant movement through a revision cycle. I would do research on the Internet, collaborate with my mentor, and then return to revise the text and do further research. –**Jennifer Morris**

## Won’t I get Burnt Out if I Give Up My Summer?

*Many teachers hesitate to commit to eight weeks of eight-hour days. After all, aren’t summers off one of the bonuses of teaching? Won’t you be exhausted by the time school rolls around in the fall? You’d be surprised by the answer...*

“As the weeks continued and my project became more and more familiar, I found myself growing accustomed to and appreciating my new environment. I liked the sense of accomplishment I felt when I presented my work at the department meeting and showed the scientists how it would help make their lives easier. I liked having the time to tackle my ETP and really focus on how I want to teach writing, something I don’t always have time for during the school year. I liked the feeling of realizing that, as much as I enjoyed my foray into industry, I love being a teacher. The best thing about IISME is that I feel

like I'll be starting the school year with a renewed enthusiasm for what I'm doing, and with a better set of tools to help my kids understand why writing is so important."-**Kristy Garcia**

"...the Fellowship flew by as I immersed myself in project after project. In the last seven weeks, I have gained many valuable insights and invaluable friendships. My interactions with colleagues were very interesting. I learned from their perspective as parents and I offered perspectives from an educator's point of view. Through this Fellowship, my belief in business was rejuvenated. Moreover, my choice to become a teacher was reaffirmed. I still enjoyed working on spreadsheets and analyzing numbers, however, I have a grander sense of joy and pride to know that I contributed in some small way in preparing students for a career in the real world..." -**Kathleen Chau**

"I did fear that working most of my summer vacation would drain my energy, causing the return to school to be painful. I was happily surprised to find the contrary! Working in a laboratory and completing an education transfer plan have really boosted my enthusiasm. I found myself eager and excited to return to my classroom and share what I had learned over the summer with my co-workers and students. Never before have I had so much energy at the beginning of the year. The fact that I worked in an atmosphere completely different from teaching left me refreshed. I have worked shorter summer jobs and felt very tired and in need of a break afterwards. Those jobs all involved teaching. While this Fellowship has proven to me that I belong in teaching, I now see the need for me to do something different during the summers to keep my motivation high. My enthusiasm for a subject relates directly to the students. I feel the IISME Fellowships are wonderful personal development opportunities." -**Tania Vong**

"Another school year starts – my tenth year at Pioneer High School. The typical beginning of the year madness has started as I try to organize 150 students in three different classes while making sure they all learn the required standards. But something is different about this school year. A great vacation you may ask? Visiting that country I always wanted to visit? Nope. A relaxing summer of doing very little while hanging around the house and watching a hundred or so movies? Nope. You see, for the first time in my nine years of teaching, I worked for the summer. I worked at Affymetrix, Inc. through an IISME Summer Fellowship. Was it relaxing? Not exactly. Was it worth it? Definitely.

Working at "Affy" was a great experience. I met great people, learned about some of the most amazing technology I have ever been exposed to, and got to discover some eye-opening aspects about the biotechnology industry. I would never have been able to do these things while sitting on my couch all summer or visiting some far off land. In fact, I feel I am a better teacher because of it – especially in the Biotechnology class I teach each year. In fact, I know I am a better teacher because of the experience."—**Robert Zaccheo**



## About the Contributors...

<p><b>Kathleen Chau</b> teaches 2<sup>nd</sup> grade at Scott Lane Elementary in the Santa Clara Unified SD and held her 2004 Fellowship at Knight Ridder.</p>	<p><b>LaShauna Foster</b> teaches math at Juan Crespi Junior High in the West Contra Costa Unified SD and held her 2004 Fellowship at NUMMI.</p>
<p><b>Kristy Garcia</b> teaches English at Gunn High School in the Palo Alto Unified SD and held her 2004 Fellowship at Roche.</p>	<p><b>Karen Giehler</b> teaches 1<sup>st</sup> grade at Vargas Elementary in the Sunnyvale Elementary SD and held her 2004 Fellowship at Genentech.</p>
<p><b>Kimberly Harms</b> teaches biology at John Muir Middle School in the San Leandro Unified SD and held her 2004 Fellowship at Intel.</p>	<p><b>Ann Hines</b> teaches at Los Alamitos Elementary School and held her 2004 Fellowship at Silicon Valley Bank</p>
<p><b>Clint Johns</b> teaches math at Irvington High in the Fremont Unified SD and held his 2004 Fellowship at United Defense.</p>	<p><b>Parker Kelly</b> teaches computer science at La Entrada Middle School in the Las Lomitas SD and held his 2004 Fellowship at Stratex Networks.</p>
<p><b>Lindsey Mar</b> teaches math at Ida Price Middle School in the Cambrian Elementary SD and held her 2004 Fellowship at Lockheed Martin.</p>	<p><b>Jennifer Morris</b> teaches humanities at Edendale Middle School in the San Lorenzo Unified SD and held her 2004 Fellowship at Oracle.</p>
<p><b>Sean Morris</b> teaches math at Monte Vista High in the San Ramon Valley Unified SD and held his 2004 Fellowship at Intel.</p>	<p><b>Maria Reyes</b> teaches 1st grade at Franklin in the Franklin-McKinley SD and held her 2004 Fellowship at the San Jose Mercury News.</p>
<p><b>Adrienne Van Gorden</b> teaches 6<sup>th</sup> grade at Barrett Elementary School in the Morgan Hill Unified SD and held her 2004 Fellowship at Lockheed Martin.</p>	<p><b>Tania Vong</b> teaches 4<sup>th</sup> grade at Cedar Grove School in the Evergreen Elementary SD and held her 2004 Fellowship at Santa Clara University.</p>
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