Michael E. DeBakey High School for Health Professions
Houston Independent School District
Houston, Texas

hs.houstonisd.org/debakeyhs

Profile for Learning Tour conducted on
Wednesday, January 30, 2008

Thumbnail sketch

Michael E. DeBakey High School is a public magnet high school in Houston, Texas, that represents a longstanding partnership between the Houston Independent School District and the Baylor College of Medicine. Established in 1972, DeBakey High School, named for the famous heart surgeon (en.wikipedia.org/wiki/Michael_E._DeBakey), is the second oldest magnet school in Houston ISD. Dr. Charlesetta Deason is only the second principal of the school — she has been at the helm for 18 years.

Students at DeBakey apply for admission and are selected based on past academic performance, nationally normed test scores, conduct, attendance, and merit. In 2007–08 the school served roughly 700 students in grades 9 through 12. DeBakey’s curriculum focuses on precollege academic and health-oriented education programs to help students pursue health careers in their postsecondary lives.

The school sits at the edge of the Baylor College of Medicine campus. The students experience internships or medical rounds during their junior and senior years at various health-care and research facilities at the Texas Medical Center (www.texmedctr.tmc.edu).

Why we visited

We decided to conduct a learning tour of DeBakey based on its reputation as a school of excellence located in a large urban school district, Houston ISD. In addition, since 1994 the Texas Education Agency has rated it an exemplary high school in the state’s accountability system (see the Academic Excellence Indicator System (www.tea.state.tx.us/perfreport/aeis)).

In 1998, the U.S. Department of Education designated DeBakey one of 166 Blue Ribbon schools in the country and also named it one of that year’s seven New American High Schools (www.ed.gov/pubs/promisinginitiatives/nahs.html). In 2003, DeBakey was one of three Texas high schools to receive the first No Child Left Behind National Blue Ribbon Award (www.ed.gov/programs/nclbbrs/2003). One learning tour site visit team member noted that she was excited to go on the tour because “having the opportunity to visit a school that is highly recognized within the state and nation gives the team members an opportunity to learn more about how successful schools work.”
We also chose to visit DeBakey because it represents a unique partnership between a school and the Baylor College of Medicine and because the school has been in existence for more than 30 years. Learning about how DeBakey sustains its partnerships and demonstrates years of success for students was a key goal of this learning tour.

DeBakey High School’s mission statement (hs.houstonisd.org/debakeyhs/AboutUs.html) matches the profile of a STEM-focused school. That mission is “to provide a challenging, well-balanced college preparatory program which focuses on educational experiences in science and the health professions and to further an understanding of our multicultural community.”

**What we learned**

To prepare for the learning tour, site visit team members reviewed website data about the school. The information we collected from our research and the learning tour highlights the areas of school culture, integration of mathematics and science across the curriculum, student internships, and capstone projects.

1. **School culture** — Even the most organized school staff can be daunted when a team of people arrives at their campus. The learning tour visits usually begin at the start of school so visitors to campus are added to the normal business of student activity, buses, and bells. Not at DeBakey!

   The team arrived while students were still exiting buses, and we were greeted by a security guard and the assistant principal, Agnes Bell. Both said, together, “We are so excited that you are finally here. We’ve been looking forward to you coming to visit our school!”

   They escorted our team into the front office and introduced us to several office staff. We were politely asked to sign in and provide fingerprint identification, and then we were given name tags. The administrative staff quickly prepared us to be admitted to the school as visitors while the principal, Dr. Deason, introduced herself and chatted with us.

   Dr. Deason stayed with the team during the entire four and a half hours we were at the school. She provided a context for the creation of the school, noting that “Dr. DeBakey had a vision, and that vision has been established here at DeBakey. Our students live that vision every day. It is a labor of love for all of us.”

   She added, “It is a challenge for us to live up to Dr. DeBakey’s standards, and his standards go up each year. We celebrated his 100th birthday in the fall, and believe me, he is still very much involved in what goes on here at his school.”

   We viewed a 15-minute video showing Dr. DeBakey’s birthday celebration and an overview of the school. *Celebration* captures the culture of this school. The teachers celebrate the successes of their students, the students celebrate and praise their teachers and administrators, and the Baylor College of Medicine along with Dr. DeBakey celebrate and recognize the investment being made in the students at the school.
We were escorted by several senior students to visit classrooms. Because the school has many visitors, the teachers have established a system that allows for nonintrusive observations of their classes. Each classroom we visited had elected a designated student — a class ambassador.

The student ambassadors quietly introduced themselves; shook each team member’s hand; gave us the teachers’ name, the class, and the focus of the work during class; and asked if we had any other questions. We observed this same routine in all the classrooms we visited, 9th through 12th grade.

Dr. Deason explained that the students have to learn to converse with adults at the hospital during their rounds with doctors. This classroom ambassador role, then, helps them practice and build their confidence and social skills.

2. Integration of mathematics and science across the curriculum — Of the school’s faculty, Dr. Deason said, “We pride ourselves in recruiting and hiring the best for our students. We use a team approach in the interviewing process, and in several of our hirings, the teachers taught for us and we had the opportunity to observe them interacting with the kids.”

The learning tour team met with the school’s science and mathematics teachers, the majority of whom bring to the school a professional working background in the field they teach. For example, several faculty and staff members have medical degrees; the physics teacher had worked as a scientist for NASA (www.nasa.gov), and the chemistry teacher as a chemist in a national lab. Most of the 40 faculty members acquired their teaching credentials from alternative certifying agencies.

The mathematics and science curriculum moves the students from 9th grade and accelerates their progress so that all DeBakey students are required to take Advanced Placement Calculus and AP Physics and/or AP Chemistry. “The four-by-four (www.tea.state.tx.us/curriculum/fourbyfour.html) is our regular program,” noted one teacher.

Every teacher who spoke with us reported that their expectations were high but that they had to start where the kids were. The physics teacher said, “I can’t expect 9th-grade kids to walk in here knowing physics. But I can be responsible to motivate them to learn and excite them about physics.”

The calculus teacher noted that “Our kids come from all over the district. Some of them have the math skills, some of them don’t. It’s my responsibility to make sure they get the skills they need — to start at their level and move them as far as we can, AND [he said loudly] get them to love math! That’s my job.”

The teachers talked at length about the planning and integration of their content areas. The physics teacher said, “How can I teach physics if the kids don’t know the math? The
math teachers have to know what math I need for the kids to understand or it's just not going to work.”

All the teachers with whom we spoke made statements about working together every day and making sure that all the kids understand how everything they learn is related to other content and to the world.

Dr. Deason said, “We are responsible for each one of our students to become the best he or she can. We can do this only if we work as a team. Like Hillary [Clinton] said, ‘it takes a village’; we are the DeBakey village.”

3. **Student internships** — All the courses, naturally, have a health professions focus. The mathematics and science courses are contextualized as necessary to the students’ advancing to earn their white jackets. The students who met with us explained about the white jackets.

One student noted, “The white jacket symbolizes our academic accomplishments as well as our personal development. When we are given the white jacket, that shows that we are ready to go to the hospital and do rounds with the surgeons, go the various departments in the hospital for our rotations and interact with the doctors. It is a real badge of honor.”

Dean of Instruction Bernice Shargey and Magnet Coordinator Analisa Goudeau coordinate the hospital internships during the students’ junior and senior years. Dr. Goudeau is “on loan” to the school from the Baylor College of Medicine, where she has taught for several years. She has first-hand knowledge of what high school students must learn so that they can eventually become doctors.

One especially neat thing about the hospital internship is that the students have the opportunity to return from their rounds to their classes and discuss their experiences. Each student who goes on rounds is given time during one class a week (in either their science or their mathematics class) to reflect on their work at their internship site.

4. **Capstone projects** — The student internships support the capstone projects that the students complete during their senior year at DeBakey. These projects require collaboration between students, teachers, and the internship sites.

One of our student guides talked about his project that he had presented for review just prior to the team’s visit. He had to identify a problem, research it, come up with a solution, test that solution at his site, and report on the results. His mentor at his site helped him to dig deeper into what he was doing and bring those experiences back to his classes.

**Who is Michael E. DeBakey High School?**

The following student and teacher data were provided by the high school for the 2007–08 school year.
Students:

<table>
<thead>
<tr>
<th>Grades 9–12</th>
<th>White</th>
<th>African-American</th>
<th>Hispanic</th>
<th>Asian-American</th>
<th>Native American</th>
<th>Economically disadvantaged*</th>
</tr>
</thead>
<tbody>
<tr>
<td>728 students</td>
<td>6.5%</td>
<td>34%</td>
<td>25.5%</td>
<td>33.7%</td>
<td>0.3%</td>
<td>48%</td>
</tr>
</tbody>
</table>

*Percentage of students who are economically disadvantaged is determined by calculating the number of students participating in the federal free or reduced-price lunch program.

Teachers:

<table>
<thead>
<tr>
<th>White</th>
<th>African-American</th>
<th>Hispanic</th>
<th>Asian-American</th>
<th>Native American</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>45%</td>
<td>24%</td>
<td>11%</td>
<td>19%</td>
<td>2%</td>
<td>34%</td>
<td>66%</td>
</tr>
</tbody>
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Business/community:

Until Dr. Michael E. DeBakey’s death on July 11, 2008, key support came from the namesake of the high school. In our visit during January 2008, we saw clear indications that Dr. DeBakey still at that time continued to act as a close advisor and was actively involved in the development of the school.

During our visit, Principal Deason noted that “Dr. DeBakey has slowed down in the last couple of years, but he makes an effort to visit the school regularly. He participates in our planning and always provides insight into what he expects to happen in the future.”

Dr. DeBakey was instrumental in developing the internship program for the students. Dr. Deason noted that Dr. DeBakey felt that school was only one path to developing young people and that the students needed to interact with physicians, surgeons, dentists, and so on if they were to pursue medicine.

Graduation requirements for DeBakey students:

- 4 years of English
- 4 years of social studies
- 5 years of mathematics (culminating in AP Calculus)
- 5 years of science (culminating in an AP-level course)
- 4 years of health sciences (which includes biochemistry, microbiology, histology, advanced anatomy and physiology, radiology, medical terminology, and ethics)
- 3 years of a foreign language (same language for all 3 years)
- 1 year of a computer course
- 1 year of fine arts
- 1.5 years of physical education
- 1 semester of public speaking
- 1 semester of study skills
- 1 semester of SAT preparation
- 100 hours of documented community service
- Mastery of the content assessed in the Texas Assessment of Knowledge and Skills

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