



Discover your inner scientist in the DeBakey Cell Lab!

The DeBakey Cell Lab is an exciting and immersive lab experience designed to promote science literacy and inspire the next generation of scientists. While in the lab, students in Grades 2 and up suit up with lab coats, gloves, and goggles and experiment with a variety of lab techniques and lab equipment. All lab experiments are available in English and Spanish.

Who is Dr. DeBakey?

Dr. Michael E. DeBakey was a world-renowned cardiovascular surgeon, scientist and educator. During his 75-year career, this leader in the surgical treatment of heart and blood vessel disease performed surgery on over 60,000 people and invented blood transfusion technologies, artificial heart components and grafts to repair damaged blood vessels. In addition to performing some of the earliest heart transplants, he was a pioneer in his field, developing procedures for coronary bypass surgery and the surgical repair of aortic aneurysms, a procedure that he himself underwent in his 90s.

What you need to know:

This hands-on exhibit is an additional \$50.00 per session. Each session can include up to 8 students and 2 chaperones.

Your session in the lab will last an hour. During that time, students will do two experiments.

Due to the nature of the experiments, the lab is recommended for grades 2 and up. Our lab educators will guide your students through lab stations that are geared towards their grade level.

All guests ages 13 and under must be accompanied by an adult chaperone.

In order to minimize the potential spread of COVID-19, we have put additional safety measures in place in the lab. These include limits on the number of people within the lab at a given time. In addition, we have temporarily closed lab experiments that cannot be performed with our safety precautions in place. Masks are required in the lab and throughout the Museum.

DeBakey Cell Lab Benches

Anti-Microbial Investigations

Many household cleaners contain microbe-fighting ingredients. Using the scientific method, you'll test the effectiveness of several of these agents, such as bleach, hand soap and hand gel, on a common strain of bacteria, *bacillus moratorium*. A great way to reinforce concepts like hypothesis and controls!

Age: Grades 2 and up

Time: 20 minutes

Unrolling DNA

DNA is considered the "thread of life." Located on chromosomes in the nucleus of cells, this molecule provides cells with the instructions that they need to do their jobs. At this lab bench, you'll extract – and see – DNA from wheat germ cells. A great way to complement lessons about DNA and the structure and function of cells!

Age: Grades 2 and up

Time: 15 minutes

Seeing Red

Blood is more than just an icky liquid that comes out of cuts. It's a complex mixture of cells and plasma that travel throughout the body, bringing our cells the gases, nutrients, and chemicals that we need to survive. At this lab bench, you'll explore the properties of this amazing substance while performing up to three different procedures using real* and simulated blood.
*sheep's blood

Age: Grades 4 and up

Time: 30 minutes

Mystery Microbes

Bacteria get a bad rap. While some bacteria can be harmful, many bacteria are helpful, essential even. In fact, we rely on some bacteria to keep us healthy. At this lab bench, you will stain, test, and identify one of four unknown strains of bacteria that are commonly found in and on the human body using equipment and materials typically found in clinical bacteriology labs.

Age: Grades 6 and up

Time: 40 minutes

Giant Chromosomes

Chromosomes are structures in the nucleus of a cell. They contain the DNA and genes that an organism needs to function. As it turns out, many of the genetic sequences found in the fruit fly genome are similar to those found in humans. At this lab bench, you'll stain DNA from fruit fly salivary glands and examine the DNA in tightly packed chromosomes under a microscope.

Age: Grades 6 and up

Time: 40 minutes

This activity involves a longer time commitment and is recommended if you have completed the other benches and would like an extra challenge.

