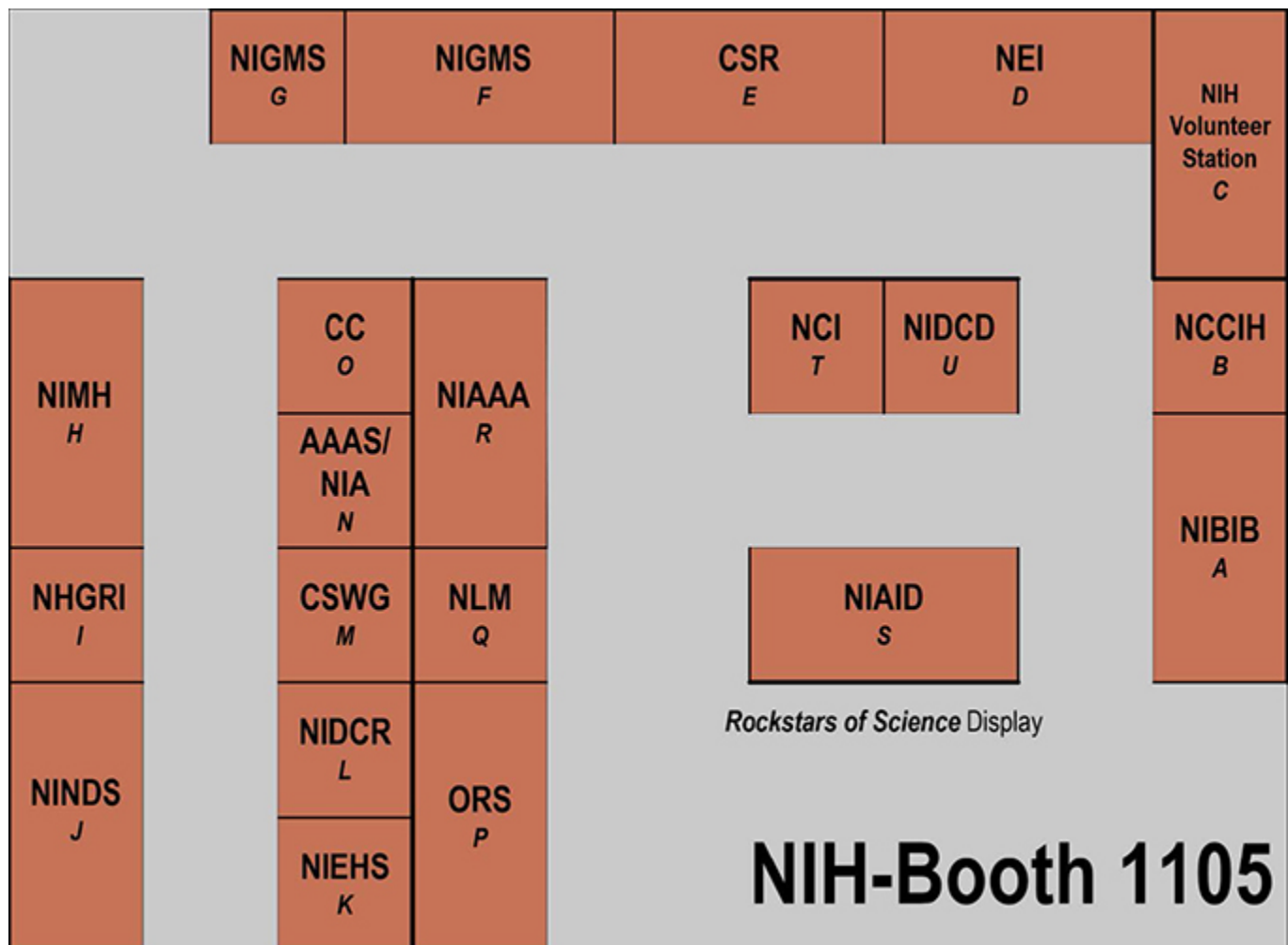


NIH at the 2018 USA Science & Engineering Festival

NIH Pavilion Location



NIH Pavilion Exhibit Map



NIH Activities

Booth	Activities	NIH Office
A	<p>“Who Wants to be a Bioengineer?” Video Game Challenge! - Play our iPad game “Who Wants to be a Bioengineer?” and rack up points while learning about bioimaging, robotics and bioengineering!</p> <p>Surgery of the Future - Surgery of the Future is an interactive experience that highlights research technologies funded by NIBIB that improve surgical procedures. Move through a virtual operating room to learn about technologies including new imaging tools, robotics, biomaterials, and more.</p>	NIBIB
B	<p>Match the Yoga Pose, Complementary Health Approach Word Search, and Your Healthiest Self Toolkits - Stop by our booth to match different yoga poses with their name and learn where to find more information on the science of Tai chi, yoga, and other complementary health approaches. You’ll also get a chance to get information on becoming your healthiest self. And don’t forget to pick up a complementary health approach and herb word search for the trip home. The mission of the National Center for Complementary and Integrative Health (NCCIH) is to define, through rigorous scientific investigation, the usefulness and safety of complementary and integrative health interventions and their roles in improving health and health care.</p>	NCCIH
C	NIH Volunteer Station	NIH
D	<p>More than Meets the Eye - The NEI booth will explore how the brain and eyes work together to help us see. Visitors will learn the anatomy of the eyes using a 3D model, and can experience how people with the most common eye diseases perceive their surroundings by using simulator cards. NEI staff will guide visitors through optical illusions, and games that trick the eyes, as a fun way of explaining how the brain processes visual information like depth, color, and motion. Another popular game involves throwing a ball into a hole while wearing goggles, which shows how quickly the brain compensates for disoriented vision. This year, we will have a virtual reality headset that allows visitors to experience how people with age-related macular degeneration or cataracts experience their environment. Institute staff will be on hand to answer questions.</p> <p>Take-home message: The human visual system is composed of many parts that work together. The eyes receive visual images and translate them into messages that are sent to the brain. Scientists and eye health care providers are studying how vision works, as they explore new treatments for eye diseases.</p>	NEI

Booth	Activities	NIH Office
E	<p>NIH Scientist Launch Game - Check out the new game app designed to launch tomorrow's scientists into the awesome world of health research. The game lets you experience the challenges and excitement of becoming a scientist, getting a research grant and having a blast advancing science and health. This game is being developed by the NIH Center for Scientific Review, which receives all NIH grant applications and reviews the majority of them so NIH can fund the best research.</p>	CSR
F/G	<p>Cell-e-bration of Science! - Come celebrate the cell, the basic unit of life. See amazing pictures of cells, take a selfie with a cell, and write your name with protein letters.</p> <p>Let's Get Healthy! - Anonymously participate in an interactive health and wellness exhibit that will allow you to analyze your daily habits such as diet, sleep, stress. After the USASEF, participants can re-take the health modules on-line using your anonymous barcode. This will allow you to view changes to your health and wellness in real time using very cool automated algorithms and infographics.</p>	NIGMS
H	<p>See YOUR BRAIN in Action! - Your brain coordinates how you think, feel, remember, behave and even move. It does this through billions of nerve cells, called neurons that form connections or synapses. These connections are actually chemical and electrical circuits that work together to control your emotional and physical well-being. This interactive presentation will demonstrate how the brain and spinal cord control your body's movements and muscle contractions. Children will get to see recordings of the electrical activity generated by muscles in their arms and fingers and gain a deeper understanding of the extent of the human nervous system.</p> <p>The "Phantom" in Your Limbs - Participants will be amazed at how their brain can be fooled through this two-part demonstration that explores the phenomenon of phantom limb pain. In this hands-on activity, NIH scientists will trick participants into thinking that a rubber hand is actually part of their own body while educating them on phantom limbs. The second part of the activity will demonstrate how a similar brain and cognitive manipulation ("mirror therapy") can reduce phantom limb pain in amputees.</p> <p>Trick your brain! - Your brain coordinates how you think, feel, remember, behave and even move. It does a lot of things at the same time, and this goes extremely well most of the time. But, do you think it is possible to trick your brain? Yes! When you are used to doing one thing, it's very difficult to do something else at the same time. We will show you how to trick your brain and explain how this works.</p>	NIMH

Booth	Activities	NIH Office
I	<p>Getting to Know DNA! (Friday) - Do you know what DNA looks like? We will give you an opportunity to see first hand what DNA isolated from strawberries looks like using household materials. Volunteers will assist participants with preparing strawberries for the extraction and isolation of DNA.</p> <p>Genetic Trait Tree (Friday/Saturday/Sunday) - Can you roll your tongue? Or do you have dimples? Have you ever wondered why? Come explore the wonder of DNA with NHGRI. Volunteers will guide the participants through some simple, hands-on and fun DNA-related activities designed to help us get to know our DNA.</p>	NHGRI
J	<p>The NIH Brain Lobe-oratorium® - NINDS will present the Brain Lobe-oratorium® at the USA Science & Engineering Festival in April. The NINDS exhibit features award-winning graphics and hands-on models and activities. Students can explore the brain's many regions and how they work. The Lobe-oratorium's interactive computer game provides a fun challenge that further reinforces students' discoveries about the brain. In addition, NINDS information specialists and neuroscientists will be on hand to talk about the brain and to answer questions.</p>	NINDS
K	<p>Lung Capacity Measurement (and bottle model lung) - Lung capacity measurement: participant takes a deep breath, then exhale via a tube into an inverted 5 liter bottle that is filled with water. The amount of water that's replaced is the participant's lung capacity which will be charted based on the person's gender and height. Bottle model lung: a soda bottle model lung will be used to demonstrate the anatomy of human lungs, mechanism of inhalation and exhalation, adverse health effects caused by disease which constricts airway, such as asthma.</p>	NEIHS
L	<p>Bacteria, Brushing, and Biosensors - We can't see them, but bacteria are all around us, on us, and in us, including in our mouths. Scientists can use special tools called biosensors to detect them. Biosensors can also be used for evaluating oral and overall health. Booth visitors will participate in an interactive, hands-on experiment to measure bacterial contamination on various surfaces using a biosensor. Overall, attendees will learn how prevalent bacteria are in our world and how removing bacteria from teeth with regular tooth brushing can keep our mouths healthy.</p>	NIDCR

Booth	Activities	NIH Office
M	<p>Team-up: Play games to advance science! - Come game with us! Learn about neuroscience, mouse retinas, and how you can contribute to science through game play with the NIH Citizen Science Working Group. The trans-NIH working group is interested in incorporating citizen science methodologies into NIH biomedical research in a way that maintains high levels of scientific and ethical standards. Citizen Science is a collaborative approach to research involving the public, not just as subjects of the research, or advisors to the research, but as direct collaborators and partners in the research process itself.</p>	CSWG
N	<p>Getting to the (very small) point: AFM - We use our sense of touch to gather information about the world—running our fingers across things to find out if they are soft and fluffy or rough and scratchy. A kind of microscope called an atomic force microscope does the same—it runs a tiny ‘finger’ probe over the surface of an object to create a texture map of the microscopic surface, allowing us to see parts of objects we cannot see with our eyes alone. At this booth, you’ll learn about atomic force microscopes through hands-on activities and a model to demo how these microscopes really work.</p> <p>3D Actin Puzzle: Strength in Numbers - Proteins are large molecules that keep the body's cells working properly in different ways. One protein, called actin, supports cell structure, allows cells to move and divide, and provides a path for other proteins to move along. Explore the 3D structure of actin and see how its shape can affect how well it can do its job. Participants will learn how to build a 3D model of an actin fiber that would best allow actin to carry out its cellular functions.</p>	AAAS/NIA
O	<p>Under Your Skin - Check out what's going on under your own skin. Visitors will be able to see what their veins look like on a TV monitor using a handheld scanning device. You can also view the electrical activity of your heart!</p>	CC
P	<p>The Germ Stops Here - To prevent Mr. and Mrs. Germ from within a lab escape to outside of the lab our engineers designed a mock up lab demonstrating directional airflow. You are welcome to enter the lab to experience directional airflow yourself, just like how NIH researchers experience labs that research anthrax, tuberculosis and other nasty viruses. Once inside the lab, you will look into a microscope and identify the germ. But before you can enter our lab, you will be required to put on the proper personal protective equipment needed so that you can be protected, just like our NIH researchers.</p>	ORS

Booth	Activities	NIH Office
Q	<p>Toxic Toss! - Believe it or not, learning about smelly stuff like mold, paint thinner, model airplane glue, and furnace fumes can be fun! Loosely based on NLM's ToxMystery online game, participants will learn about the hazardous substances that might be found in and around your house. This beanbag toss activity teaches kids about hazardous substances and the potential risk to human health when they're not handled properly. We'll have small prizes for those who guess the toxic substances while showing off their tossing skills!</p> <p>Coloring Our Collections - As the world's largest medical library, the National Library of Medicine has more than 28 million books, journals, and other items! We won't ask you to color them all, but our staff has selected some of our very favorites for you to color. The images will relate to NLM's popular online exhibition, <i>Harry Potter's World: Renaissance Science, Magic, and Medicine</i>, plus DNA and gene structures, and other medical topics, with links to NLM sites where coloring students can learn more. There will be something for everybody!</p>	NLM
R	<p>NIAAA Cool Spot Carnival - To promote youth understanding of the effects of alcohol on coordination and the dangers associated with these effects (e.g., accidents while driving under the influence, etc.) NIAAA will present its popular "Cool Spot Carnival," which will use resources and messages from the Institute's Cool Spot website geared toward young adolescents.</p> <p>At the Cool Spot Carnival, young people will have the chance to play a ball-toss carnival game while wearing "fatal vision goggles." These glasses distort the vision of the wearer to mimic the effects of alcohol on motor skills. This helps drive home the message that, even though adolescents may not feel alcohol's effects as immediately as older individuals do, they ARE being affected and must be alert to the dangers of alcohol for their age group.</p>	NIAAA
S	<p>Focus on Flu - This year marks the 100th anniversary of the 1918 flu pandemic, which sickened as much as one-third of the world's population and has been called one of the deadliest pandemics in history. One hundred years later, flu remains a significant cause of illness in the United States and around the world. Learn about seasonal and pandemic influenza and how researchers are working to combat the virus. This includes working toward a universal flu vaccine that could provide long-lasting protection against multiple strains of influenza, such as those that cause seasonal flu, as well as emerging forms capable of causing a global pandemic. With interactive games, puzzles, activities, and 3D prints related to the influenza virus and research, the 1918 pandemic, and the quest for a universal flu vaccine, this exhibit has something for everyone.</p>	NIAID

Booth	Activities	NIH Office
T	<p>Modeling Mitosis and Cell Count-Down - Did you know that when organisms grow, it isn't because their cells are getting larger? Organisms grow because cells are dividing to produce more and more cells. In the human body, nearly two trillion cells divide every day! Cell division or mitosis, is the process where one old (parent) cell divides to form two identical new (daughter) cells. But what happens when this process goes wrong? Usually, old cells die when they make mistakes or get damaged. But unlike normal cells, cancer cells break the rules of mitosis – dividing and dividing to create a mass of extra cells, also called a “tumor.” At the booth, visitors can walk through a hands-on activity that models the different stages of mitosis, and see how errors in mitosis can lead to cancer. They can also compete with friends to see who can identify the most cells in each stage of division during the Cell Stage Counting game.</p>	NCI
U	<p>Sensation Station:</p> <ul style="list-style-type: none"> • Turn down that noise! - Have fun with hands on activities to learn about how you hear, and how you can damage your hearing with noise that is too loud for too long or too close. Kids can spin our Q&A wheel to test their know-how on protecting their hearing during everyday activities, use a tuning fork to move a ping-pong ball to see how sound waves work, and hear a high-pitched sound that their parents probably can't. Presented by the public education campaign, It's a Noisy Planet. Protect Their Hearing.[®] • Feeling off balance? - Stop by and test your balance skills with this fun activity to show what kinds of sensations help you keep standing without toppling over. Participants will discover how changes to their senses of touch and vision affect how well they can balance while standing on one foot. • That tastes funny? - Explore how taste and smell work together! Taste cells on your tongue pick up certain taste molecules from your food or drink, and cells inside your nasal passages pick up odor molecules in the air. Find out how smell contributes to how we taste food. Plus, take a quick taste test to see if you are in the 25% of people to have a gene that lets you taste a certain bitter compound. Blech! 	NIDCD