



**13th Annual Asian Pacific Islander American Heritage Month
Celebration Presents**



APIA Inventors
Think! Draft!
Create!



Activity Book

APIA Biography Project
Asian American Studies
Department
College of Ethnic Studies
San Francisco State
University
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THINK! DRAFT! CREATE!

APIA Inventors

An Activity Book

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2026 LEAD SPONSOR

Asian Pacific Islander American Biography Project

THE APIA BIOGRAPHY PROJECT



Lorraine Dong and Jeannie Woo, Directors

The Asian Pacific Islander American (APIA) Biography Project began in 2012 under Asian American Studies Professors Lorraine Dong and Jeannie Woo at San Francisco State University. The project's primary mission is to provide free and accessible APIA resources for children and adults through a website (apiabiography.sfsu.edu), and more. It is a Community Service Learning (CSL) project based mainly on the research and works created by AAS 512 (Asian American Children's/Adolescent Literature) students at San Francisco State. Their efforts are published here in the 2026 APIA Inventors Activity Book. The APIA Biography is mainly funded by private donations.

email: apiabiography@gmail.com



website: apiabiography.sfsu.edu

2026 Cosponsors

SFPL - SAN FRANCISCO PUBLIC LIBRARY



San Francisco Public Library

Established in 1878, the San Francisco Public Library, a 27-branch library system, serves San Francisco through its diverse and extensive collections, programs, and exhibits. In 2013, the APIA Biography Project launched its inaugural event at the Merced Branch library. In subsequent years, the Magazines and Newspapers Center at the Main Library collaborated with the APIA Biography Project to celebrate APIA Heritage Month. Then in 2022, the Library's Children's Center and Chinese Center joined to support this annual program. SFPL champions community engagement in its mission to provide "free and equal access to information, knowledge, independent learning, and the joys of reading for our diverse community."

website: sfpl.org

SQUARE AND CIRCLE CLUB



Square and Circle Club was founded in San Francisco Chinatown in 1924 by seven young ladies to aid flood and famine victims in China. Since that compassionate beginning and to this day, the Club has continued its tradition of supporting and caring for the needs of the community. Through the years, in addition to volunteering and assisting numerous community organizations and individuals, Square and Circle has grown and evolved as a multi-tasking philanthropic organization. It is the oldest Chinese/Asian American women's service organization in the nation. The Club became an APIA Heritage Month cosponsor in 2016 and is also serving as the APIA Biography Project's fiscal agent.

website: squareandcircleclub.org

TACT - The Association of Chinese Teachers



Founded in 1969, The Association of Chinese Teachers (TACT) is a non-profit organization in San Francisco. Over the years, it has been involved in issues such as affirmative action, bilingual education, curriculum development, and educational advocacy for the APIA community. TACT awards scholarships to high school seniors and holds yearly professional development events. Beginning in 2013, TACT has cosponsored the annual APIA Heritage Month celebration with the Asian American Studies Department at San Francisco State University and the San Francisco Main Public Library.

website: tactsf.org

Think! Draft! Create!

APIA Inventors

Introduction

Jeannie Woo

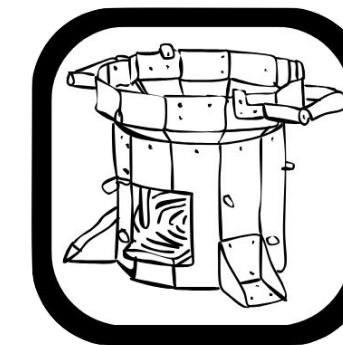
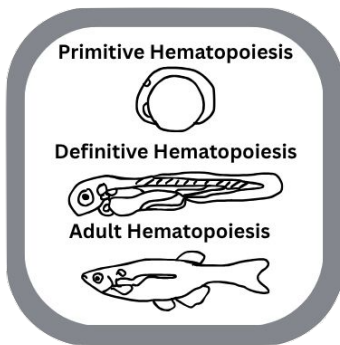
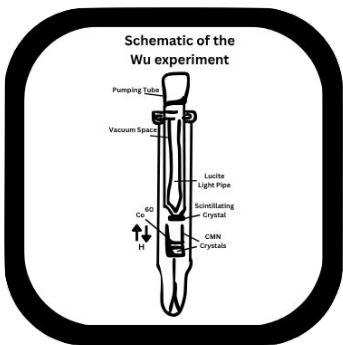
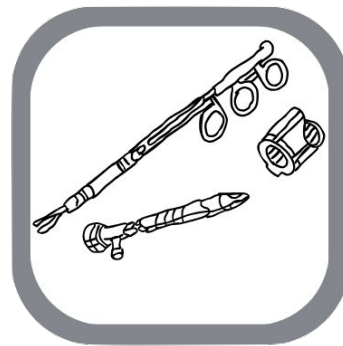
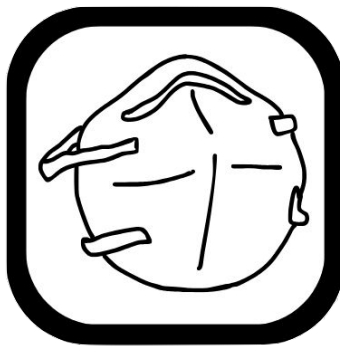
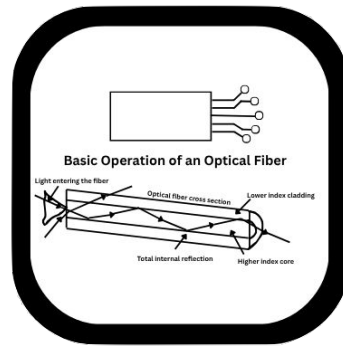
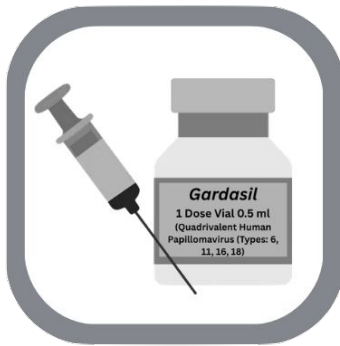
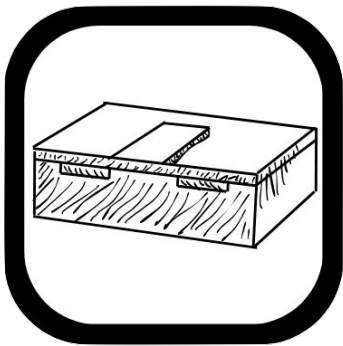
Asian American Studies Department, San Francisco State University

An invention is something new or something that improves what already exists – whether it is a product, a tool, a process, or a scientific method that helps people, communities, and society in some useful way. In May 2026, the Asian American Pacific Islander American (APIA) Biography Project focused on twenty-nine APIA inventors for our thirteenth annual APIA Wall of Fame at the San Francisco Main Public Library (SFPL). We highlighted how APIA ingenuity and creativity have made our lives easier, improved our health, boosted the economy, or just helped things run more smoothly.

APIAs have invented cooking devices, toys, mechanical devices, protective equipment, and scientific methods. They paved the way to cure or mitigate disease, advance child development, protect from biohazards, innovate surgical procedures, and modernize cooking methods. Joyce Chen enhanced functionality by inventing the “Peking Wok” (1970), a flat-bottomed wok adapting to the modern electric and gas stoves to make Chinese cooking more accessible in the American home. The busy professionals’ favorite, Instant Pot (2010), came from the engineering mind of Robert Wang who wanted to save time and effort on meal preparations. Other inventions improved the quality of life while addressing health needs, from Flossie Wong-Staal discovering the anatomy of the HIV virus (1985) to Ann Tsukamoto Weissman isolating human blood stem cells (1990) to advance gene therapy. Pedro Flores revolutionized the “slip-string” yo-yo design (1920s) that popularized the yo-yo not only as a fun toy but also as a therapeutic tool for occupational therapists to help adults and children with physical dexterity, mental concentration, and fine motor skills. Medical technologies enhanced safety and quality of life with the invention of the Black Falcon (1998) by Akhil Madhani, a robotic arm that introduced safer and less invasive surgeries. The world’s survival during COVID-19 was not accidental but powered by innovations like Peter Tsai’s N95 filtration technology (2010s) that protected frontline workers, slowed transmission, and saved countless lives. Without it, the pandemic’s toll would have been far more devastating. The twenty-nine inventors in our Wall of Fame have in common the desire to improve the quality of life that set in motion medical, cultural, nutritional, and scientific innovations. With the current anti-immigrant environment and rollback of Diversity, Equity, and Inclusion programming and funding, it is even more vital now to remember and acknowledge the contributions of immigrants and communities of color to the United States of America and the world.

This Activity Book for elementary school students was created by Asian American Studies students at San Francisco State University to commemorate some past and present APIA inventors. Our 2026 APIA Heritage Month celebration honored them at SFPL for the entire month of May. The APIA Wall of Fame is displayed at the Children’s Center with a scavenger hunt for children. A separate display at the Chinese Center specifically highlighted Chinese American inventors. In addition to these events, the APIA website (apiabiography.sfsu.edu) featured related activities and resources. We thank this year’s cosponsoring community partners: SFPL, Square and Circle Club, and the Association of Chinese Teachers (TACT).

2026 Wall of Fame of APIA Inventors



Joyce Chen

(September 12,
1917-August 23,
1994)

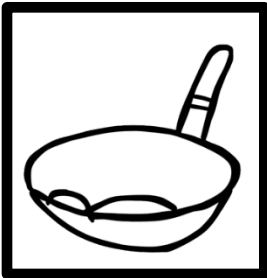
**Chef,
Restaurateur,
Entrepreneur**

**Chinese
American**

Place of Birth:
Beijing, China

Place of Death:
Lexington,
Massachusetts

Invention: Peking
Wok



Danyelle Guerrero (SFSU 2024)

Joyce was born in Beijing and moved to Massachusetts in 1949. As a groundbreaking chef, author, television personality, and entrepreneur, she had a plethora of achievements. Joyce popularized Chinese dishes in America like Peking duck and moo shu pork. She established Joyce Chen Products, which sold Chinese cooking utensils. Most significantly, she invented and patented the Peking wok. This unique wok was designed with a flat bottom so it could sit on electric and gas stoves. Joyce received multiple awards, among them being the Outstanding Achievement Award for Business and Industry in 1985. She was inducted into the James Beard Foundation Hall of Fame in 1998.

Josephine Cheng

(b. 1953)

Researcher,
Computer
Scientist

Chinese
American
Place of Birth:
Vietnam

Invention: Db2



Thomas Tang (SFSU 2025)

Josephine was born in Vietnam to Chinese parents and grew up in Hong Kong. After graduating from UCLA with BS and MS degrees, she joined IBM's Santa Teresa Lab, now the Silicon Valley Lab, on the Db2 Database Project. Josephine was responsible for developing IBM's web database technology. She led the development of Db2, a 1984 system that stores, manages, and retrieves data, enabling internet users to access vast amounts of data. Josephine is known for her work in relational database technology, holding multiple database optimization related patents. She was inducted into the US National Academy of Engineering (NAE) in 2006.

Alice Min Soo Chun

(b. 1975)

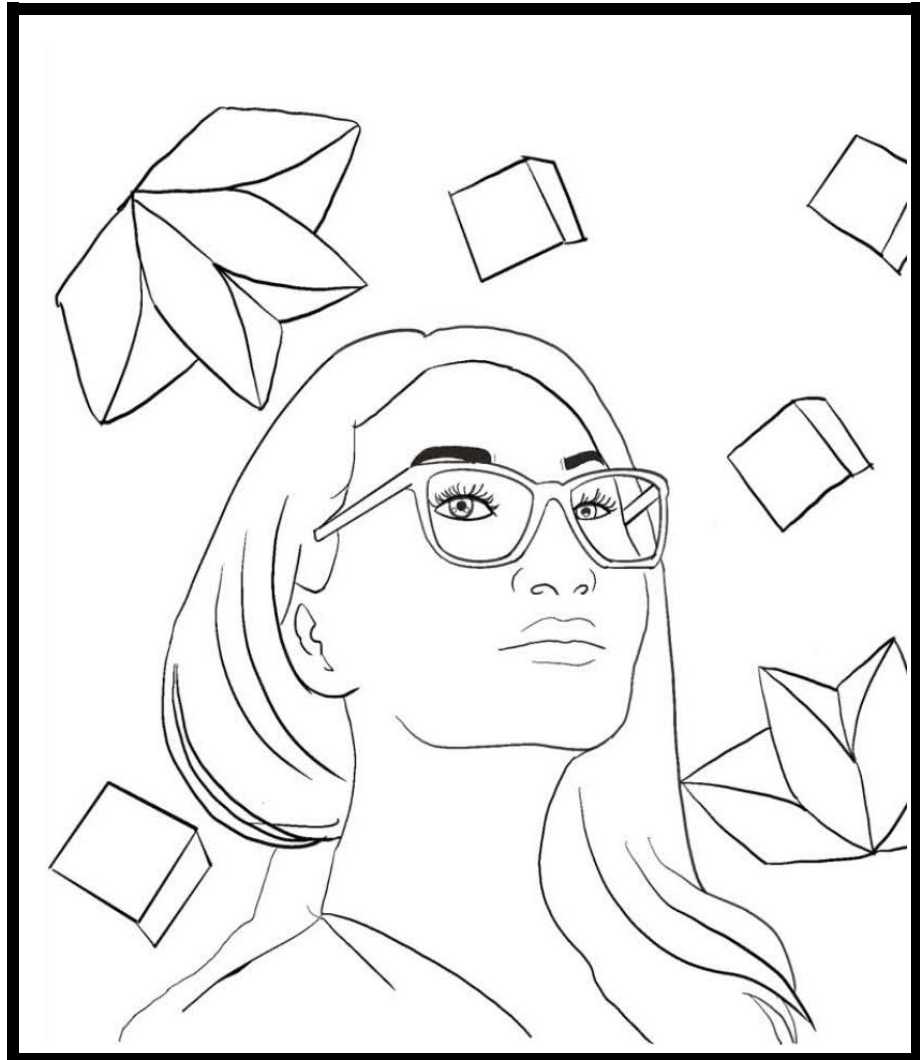
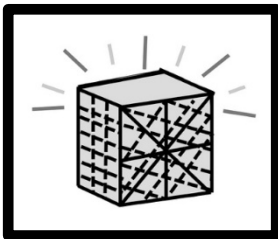
Entrepreneur

Korean American

Place of Birth:

Seoul, South Korea

Invention: SolarPuff



Brittany Sumpter (SFSU 2025)

Alice grew up between South Korea and upstate New York. Having always been fascinated by structure and design, she earned degrees in architecture and later became a professor in architecture and material technology at Columbia University. With her passion for material technology trends and wanting to help the underserved and her son's asthma, Alice began focusing on solar technology. Her most well-known and patented invention is the SolarPuff, a self-inflatable, portable solar-powered LED lantern for camping, emergencies, and ambient settings. It has impacted over one million people worldwide. In 2015, Alice launched Solight Design, and has won numerous awards, including the US Patent Award for Humanity.

Pedro Flores

(April 26, 1896-
January 3, 1964)

Entrepreneur

Filipino American

Place of Birth:

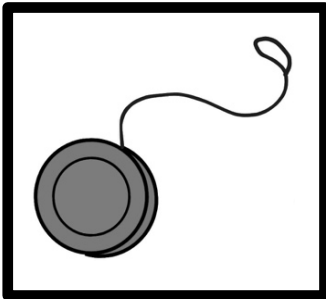
Vintar, Ilocos Norte,
Philippines

Place of Death:

Coshocton, Ohio

Invention: Yo-yo

(Slip-String Design)



Cheng Lu (SFSU 2025)

Pedro was an immigrant who moved to the United States in 1915. He grew up with yo-yos in the Philippines, where the name “yo-yo” originated. The toy existed in various cultures throughout the world. Pedro did not patent the first yo-yo; James L. Haven and Charles Hittrick did in 1866. In the 1920s, Pedro started a company. He registered/copyrighted and trademarked the yo-yo name, and revolutionized the toy with a crucial “slip-string” design that allowed for tricks like “sleeping.” The toy gained popularity. In 1930, Pedro sold his company to Duncan Toy Company, which expanded the yo-yo nationwide.

**Tetsuya
Theodore
“Ted” Fujita**

(October 23, 1920-
November 19, 1998)

Meteorologist

Japanese American

Place of Birth:

Kitakyūshū City, Japan

Place of Death:

Chicago, Illinois

Invention: Fujita Scale
(F-Scale)

Fujita Scale	
F-0	40-72 mph winds
F-1	73-112 mph
F-2	113-157 mph
F-3	158-206 mph
F-4	207-260 mph
F-5	261-318 mph

Enhanced Fujita Scale *In use since 2007*	
F-0	65-85 mph winds
F-1	86-110 mph
F-2	111-135 mph
F-3	136-165 mph
F-4	166-200 mph
F-5	>200 mph



Calvin Mei (SFSU 2025)

Tetsuya was a meteorologist who moved to the United States and joined the University of Chicago’s Meteorology Department in 1953. Throughout his career, Tetsuya was known for his meticulous study of tornado damage and was nicknamed “Mr. Tornado.” In 1971, he invented the Fujita (F) Scale, which classifies tornadoes based on damage intensity. The F-Scale became an internationally accepted standard for measuring tornado severity, and a modified version is used today. Tetsuya has multiple awards including NASA’s Public Service Medal in 1979 and the Japanese Order of the Sacred Treasure (Gold and Silver Star).

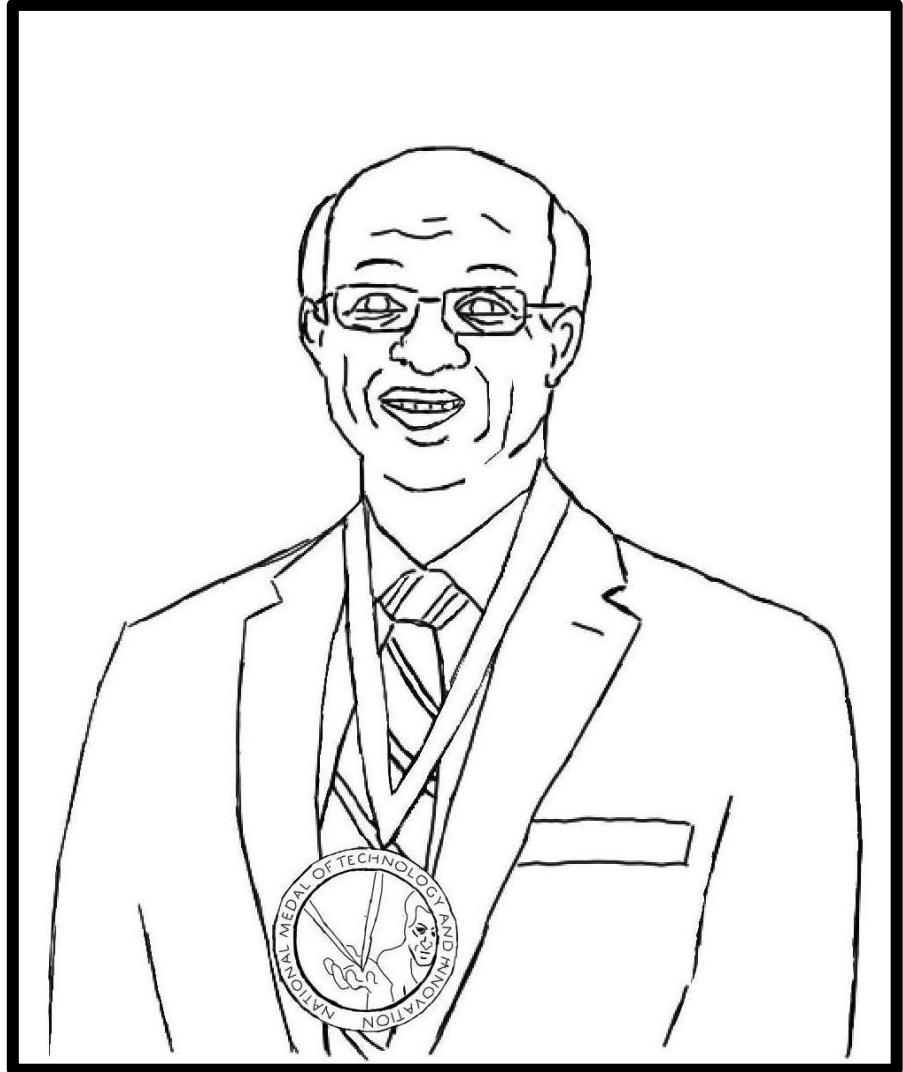
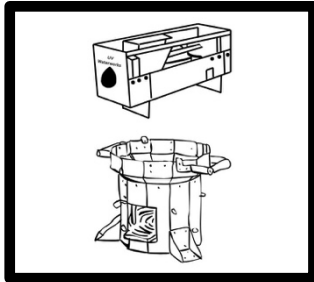
Ashok Gadgil

(b. 1950)

**Physicist,
Environmental
Engineer, Inventor**

Indian American
Place of Birth: Mumbai
(formerly Bombay),
India

Inventions: Water
Disinfecting Device
(UV Waterworks); the
Berkeley-Darfur Stove



Ellyseo Metcalf (SFSU 2024)

Ashok developed an interest in science and engineering at a young age. After graduating with a doctorate from UC Berkeley in 1979, he became a staff scientist at the Berkeley Lab where he researched solar energy applications. Ashok is well known for inventing UV Waterworks, an inexpensive system for disinfecting water, and the Berkeley-Darfur Stove, a low-cost stove that uses less fuelwood. He continues to research ways to improve the lives of millions. Ashok has received many awards, including the National Medal of Technology and Innovation, and was inducted into the National Inventors Hall of Fame in 2014.

David D. Ho

(b. 1952)

Virologist, Physician

Taiwanese American

Place of Birth:

Taichung, Taiwan

Invention:

AIDS Cocktail



Joyce D. Bantugan (SFSU 2025)

David was born in Taiwan and immigrated to Los Angeles when he was twelve. He received degrees from the California Institute of Technology (1974) and Harvard Medical School (1978). David has been at the forefront of HIV research since the beginning of the AIDS pandemic. He invented the AIDS Cocktail (a combination of antiretroviral drugs) that reduced AIDS sickness and death. For the past decade, he and his lab have focused on HIV and coronavirus transmission, and vaccine development. David has received many honors and awards, such as being named *TIME Magazine's* Man of the Year (1996) and receiving the Presidential Citizens Medal (2001).

Dawon Kahng

(May 4, 1931-
May 13, 1992)

Electrical Engineer

Korean American

Place of Birth:

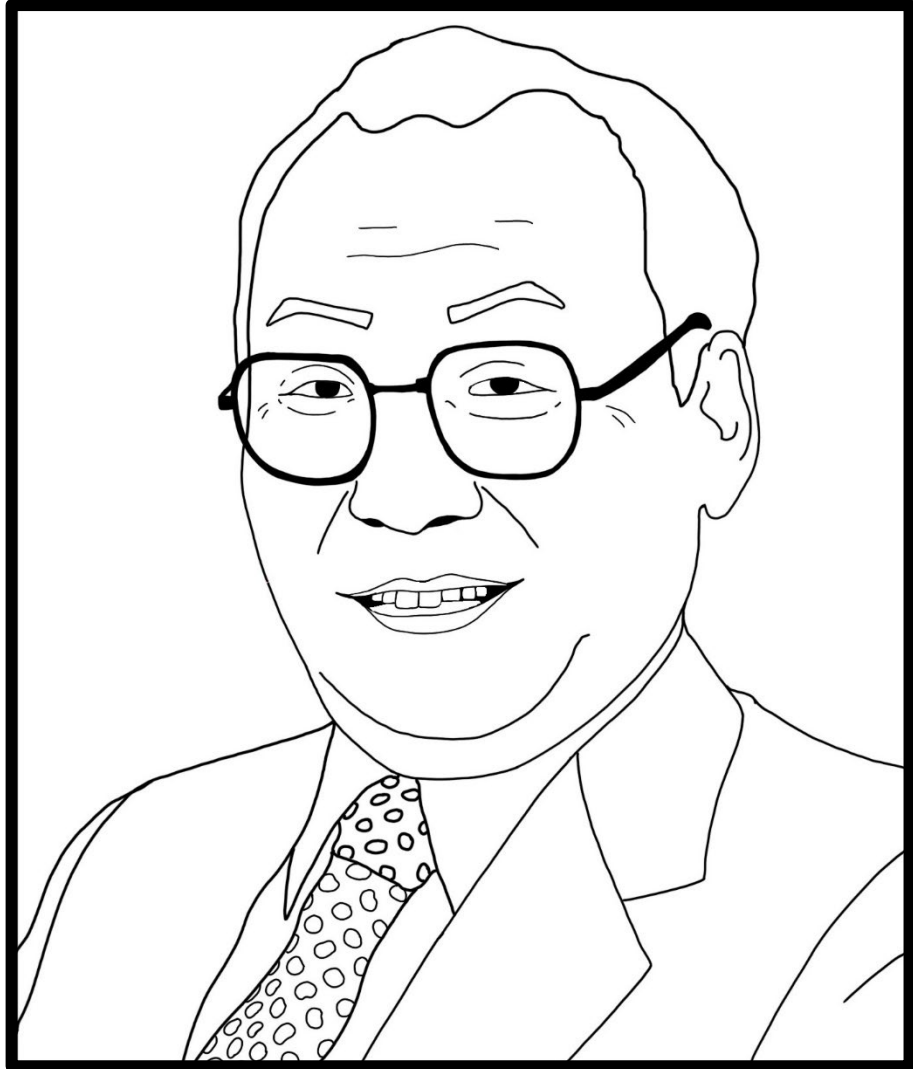
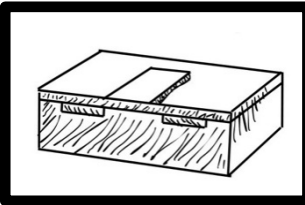
Seoul, South Korea
(formerly Keijō, Korea)

Place of Death:

New Brunswick,
New Jersey

Invention: MOSFET

(Metal-Oxide-
Semiconductor Field-
Effect Transistor)



Amelia Meaux Welch (SFSU 2024)

Dawon is a renowned researcher who pioneered the core technology of the semiconductor industry. He is the inventor of the first practical field-effect transistor (MOSFET), a patented device that controls electronic signals. Although the field-effect transistor theory existed for years, Dawon and his colleague, Martin Atalla, built the first working version in 1959-60. Today, it is the most widely used integrated circuit within the electronics industry. Dawon won many international awards for his achievements, such as the Stuart Ballantine Medal, and was inducted into the National Inventors Hall of Fame in 2009.

Narinder S. Kapany

(October 31, 1926-
December 3, 2020)

Physicist,
Entrepreneur

Indian American

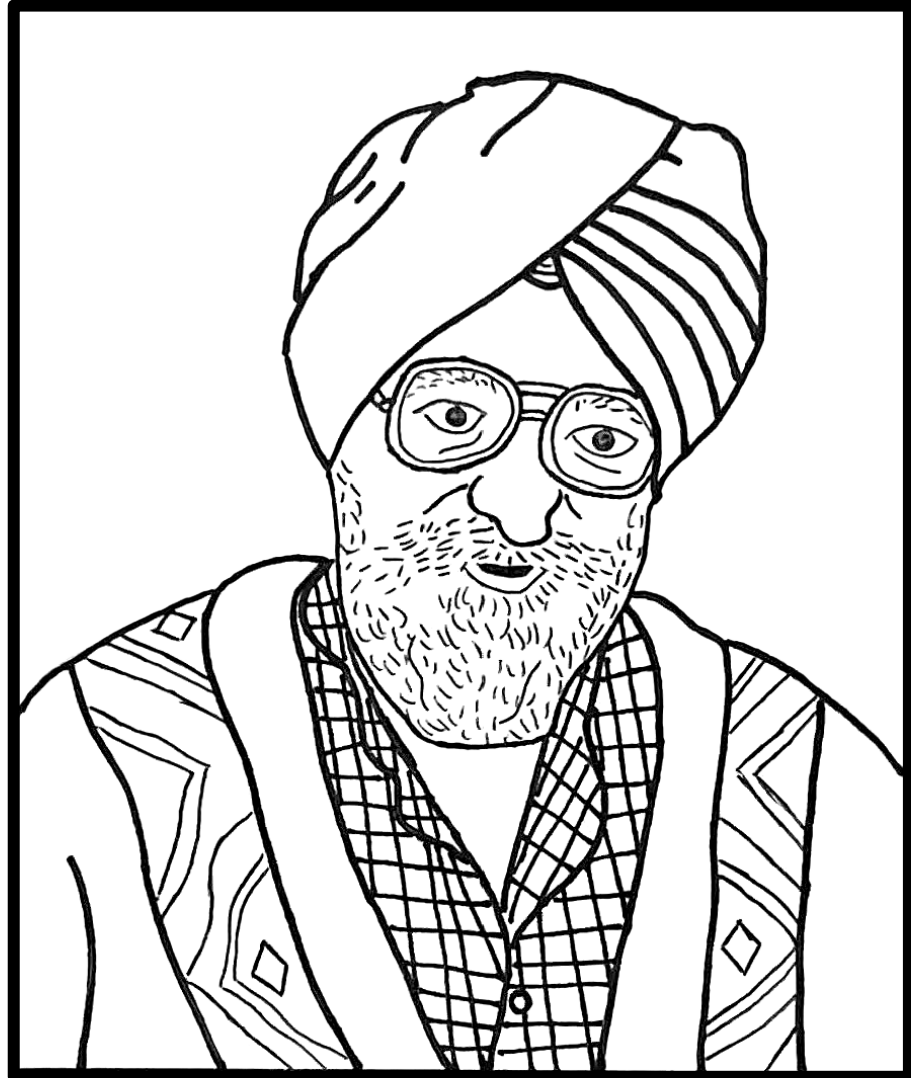
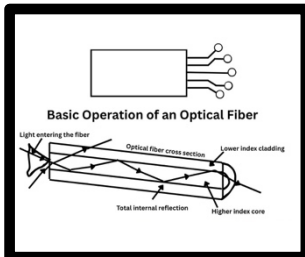
Place of Birth:

Moga, Punjab, India

Place of Death:

Woodside, California

Inventions: Fiber
Optics; Fiberscope



Arizbeth Guzman (SFSU 2025)

Known as the “Father of Fiber Optics,” Narinder is the pioneer in the invention of fiber optics. His work led to developing high-speed communication over long distances and shaping the development of today’s internet. In 1957, Narinder used fiber optic knowledge to co-develop the first flexible fiberscope with Harold Hopkins, marking the first time that allowed doctors to look inside the human body without surgery. Narinder also founded numerous businesses, like Optics Technology, Inc. and Kaptron, to commercialize fiber optic technology. His groundbreaking inventions earned him global recognition and awards, such as the Padma Vibhushan (2021) and *Fortune Magazine* “Unsung Hero” (1999).

Fazlur Rahman Khan

(April 3, 1929-
March 27, 1982)

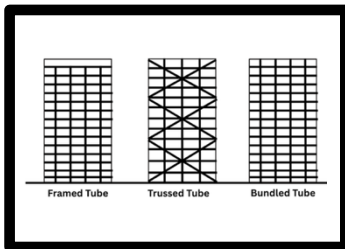
**Civic Engineer,
Structural Engineer,
Architect**

Bangladeshi American

Place of Birth: Dacca, India

Place of Death: Jeddah,
Saudi Arabia

Invention: Tubular
Structural System
(Framed Tube, Trussed
Tube, X-Bracing, Bundled
Tube)



Shayan Mohammad Shadab (SFSU 2024)

Fazlur was one of the top structural engineers of the 20th century and is regarded as the “Father of Tubular Designs.” He moved to the United States in 1952 for graduate studies and became a US citizen in 1967. In 1955, he joined the Chicago architectural firm Skidmore, Owings & Merrill, and became a partner in 1966. In the 1980s, Fazlur worked on many skyscraper projects, like the John Hancock Center and Sears (now Willis) in Chicago and the Hajj Terminal in Jeddah, Saudi Arabia. His projects utilized his patents, such as the “bundled tube” structural system, which revolutionized skyscraper construction. He received many awards, including the Aga Khan Award for Architecture, and was elected to the National Academy of Engineering in 1973.

Ann L. Lee

(b. June 1, 1961)

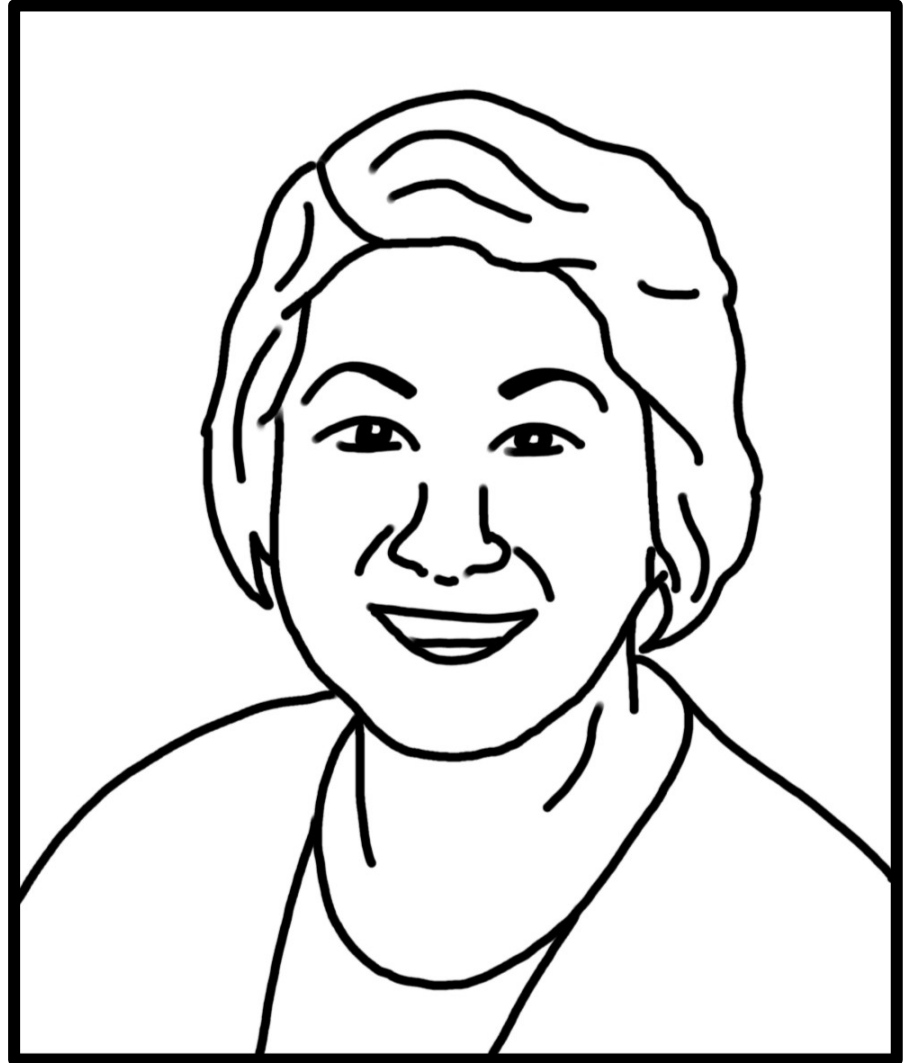
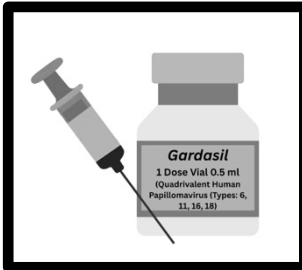
Chemical Engineer

Chinese American

Place of Birth:

Bethlehem,
Pennsylvania

Invention: First
Generation Gardasil®
Human Papillomavirus
Vaccine



Reina Howell (SFSU 2024)

Ann grew up with five sisters and parents who loved math and science. Her father worked with airplanes at NASA, and her mother studied numbers. Growing up she played basketball, volleyball, and piano, and went to Chinese school on the weekends. A high school teacher inspired her love for biology. Ann invented vaccines like Gardasil® to prevent women ages 9-26 from getting cervical cancer and genital warts. She won the Industrial Biotechnology Award in 2006 and the Genentech Women’s Professional Leadership Excellence Award in 2012. Ann mentors children, especially girls, to learn science and believes everyone is special in their own way.

Katherine Luzuriaga

(b. 1954-57)

**Physician-Scientist,
Pediatric
Immunologist**

Filipina American
Place of Birth:
Philippines

Invention:
Antiretroviral
Medication for
Pediatric HIV Patients



Janelle Rubio (SFSU 2024)

The second oldest of six siblings, Katherine grew up in the Philippines and moved to the United States for college. She has become an internationally recognized physician-scientist. Inspired by her parents' love of math, science, and helping others, she focused on improving children's health. In the late 1980s, seeing HIV hurt mothers and babies motivated Katherine to prevent its transmission and develop better treatments. In 2013, she invented a functional HIV cure in an infant, advancing research toward a true cure. Katherine earned global awards and was named to *Time's* "100 Most Influential People." A proud Filipina American, she loves adobo and lumpia.

Akhil Madhani

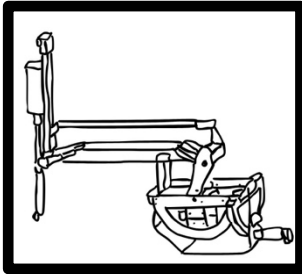
(b. 1965)

**Mechanical
Engineer,
Research Scientist**

Indian American

Place of Birth:
Nairobi, Kenya

Invention: Black Falcon



Mary Angelique Manzano (SFSU 2024)

Akhil was born in Kenya and moved to the United States when he was two. As a child, he loved building rockets with his brother. His dad was a doctor who inspired him with big ideas. At MIT, Akhil saw a video about robot surgery and invented Black Falcon, a robotic arm that helps doctors do safer, less invasive operations. He even practiced on chicken from the store! Akhil won big awards like the Lemelson-MIT Prize for Invention and Innovation in 1998. He has worked at Disney making robots like “Lucky” the dinosaur and “Wall-E,” earned six patents, and has also worked with NASA.

Sumita Basu Mitra

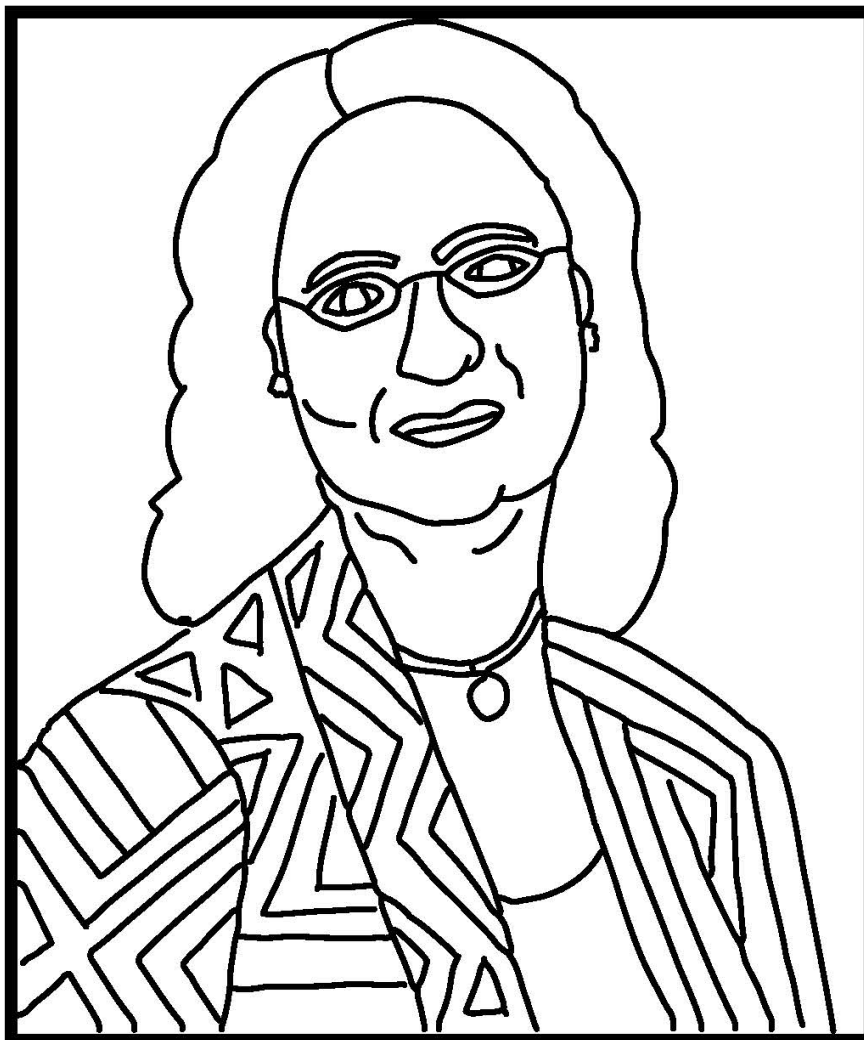
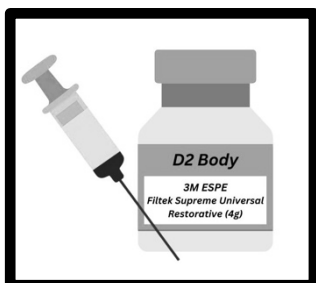
(b. February 27, 1949)

Chemist

Indian American

Place of Birth: India

Invention: Filtek
Supreme
Universal Restorative



Lorrina Jimenez-Vinoya (SFSU 2025)

Sumita grew up in India where her family were refugees during the 1947 Partition. When she chose to study in the United States, relatives objected because few women pursued science or traveled alone. Her mother's advice was to "stand up tall, stay positive." Sumita pushed forward to enter a male-dominant field. After earning her chemistry degree, she joined 3M and invented Filtek Supreme Universal Restorative, the first dental filling material with nanoparticles, making fillings stronger and more natural-looking. Sumita became a Fellow of the National Academy of Engineering and was inducted into the National Inventors Hall of Fame.

Enrique

Ostrea

(b. June 23, 1941)

Neonatologist

Filipino American

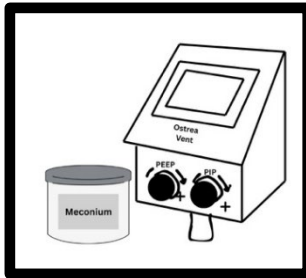
Place of Birth:

Philippines

Inventions:

OstreaVent;

Meconium Drug Test



Maon Sato (SFSU 2024)

Enrique grew up in the Philippines and studied medicine in the United States. While visiting a hospital in Bohol, he saw a twelve-year-old girl squeezing a bag to help a tiny baby breathe. When he asked what would happen if she fell asleep, the doctor said, “Then the baby dies.” This inspired Enrique to invent OstreaVent in 2012, a low-cost ventilator that saves babies’ lives. Then in 2013, he created the Meconium Drug Test to detect harmful drug exposure in newborns. Enrique’s medical innovations and care earned him over thirty awards for improving children’s health.

Barry Paw

(August 29, 1962-
December 28, 2017)

**Pediatric
Oncologist,
Biologist**

Burmese American

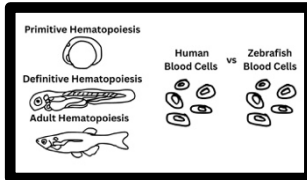
Place of Birth:

Myanmar

Place of Death:

Denver, Colorado

Invention: Process to
Use Zebrafish Models
to Study Blood
Disorders



Phong Nguyen (SFSU 2025)

Barry was born in Myanmar (formerly Burma) and fled with his parents to the United States as refugees in 1969 with one suitcase and \$30. He loved science and earned degrees from the University of California, Berkeley and the University of California, Los Angeles. Barry invented the process of using zebrafish models to study blood disorders, identifying genes linked to anemia and other human diseases. He won awards like the 2002 William Randolph Hearst Young Investigator Award. Barry was a kind teacher who loved helping his students to learn and grow, and thought teaching was just as important as making big science discoveries. Barry loved orchids and proudly wore his Berkeley cap.

Kavita Shukla

(b. 1984-87)

Inventor

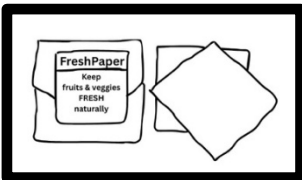
Indian American

Place of Birth:

Germany

Inventions:

Smart Lid; FreshPaper



Amanda Yunqiong Lin (SFSU 2024)

Kavita was born in Germany and moved to the United States when she was five years old. At twelve, she drank water thought to be contaminated, and her grandmother’s remedy kept her healthy. This inspired Kavita to copy that cure to fight food waste and hunger. At thirteen, she patented the Smart Lid, a lab safety device. In 2010, she founded Fenugreen to market FreshPaper, a sheet that keeps food fresh longer. She was inducted into the National Gallery for America’s Young Inventors, won the Index Design Award, and was named a Forbes 30 Under 30. Her company holds four patents today, keeping food fresh around the world.

David Sun

(b. October 12, 1951)

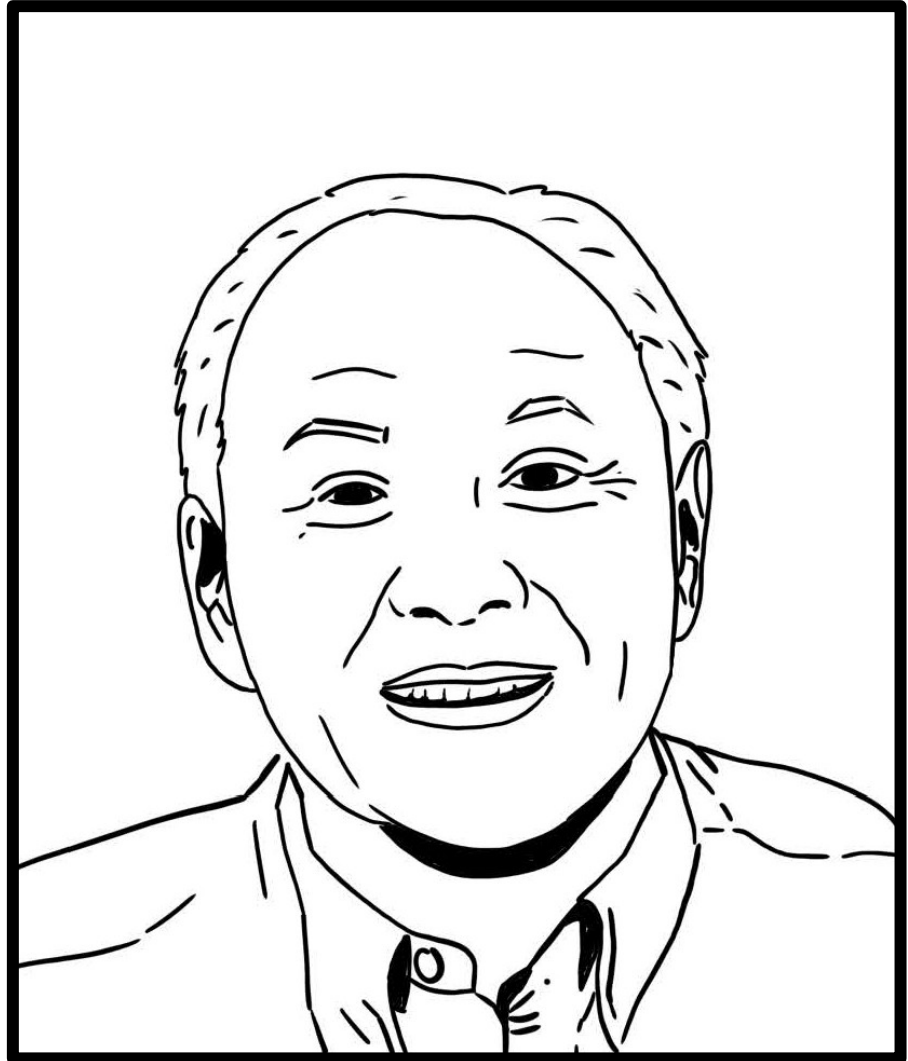
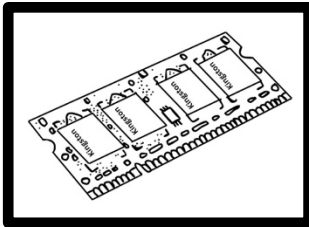
Businessman

Taiwanese

American

Place of Birth: Taiwan

Invention: Memory
Module



Pia Bacusmo-Rohmer (SFSU 2024)

David immigrated to the United States with his wife to seek a better education. He eventually earned an electrical engineering degree. After losing most of his savings in the 1987 stock market crash, David joined John Tu and invented a cutting-edge memory module in a garage. A memory module is an important component of a computer that stores data temporarily. The two men founded Kingston Technology in 1987, which has grown into a multi-billion-dollar business. They received the Business People of the Year Award in 2020 from the *Orange County Business Journal*. David and wife Diana established the Sun Family Foundation in 1999 to give underprivileged children access to education.

Ching Wan Tang

(b. July 23, 1947)

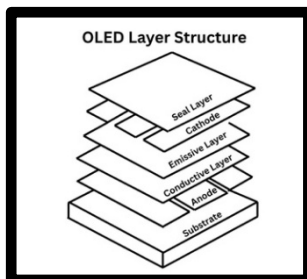
Physical Chemist

Chinese American

Place of Birth:

Hong Kong

Invention: Organic Light-Emitting Diode (OLED)



Maggie May E. Dea (SFSU 2024)

Ching Wan grew up weeding in a wet rice field with his bare hands and on bent knees. So, he made a handmade raking tool out of scrap wood and nails. Ching Wan went to Canada for his Bachelor of Science degree and then to the United States for his PhD at Cornell University. While working at Eastman Kodak, Ching Wan and Steven Van Slyke invented the Organic Light-Emitting Diode (OLED) that provides increased power efficiency and longer battery life. Ching Wan has received numerous awards, like the 2011 Wolf Prize in Chemistry. He was inducted into the National Inventors Hall of Fame in 2018.

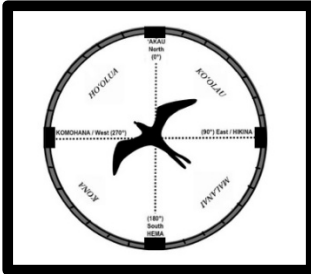
Charles Nainoa Thompson

(b. March 11, 1953)

**CEO and Navigator,
Polynesian Voyaging
Society**

Hawaiian American
Place of Birth:
Honolulu, Hawai'i

Invention: Modern
Star Compass



Burke Nguyen (SFSU 2024)

Nainoa grew up in a family that did not believe in competition. He was introduced to the ocean at age five by a milkman who took him on trips to the streams or on the reefs. In the 1970s, Nainoa invented and popularized the modern star compass that helps navigators know the direction and position of rising stars. He wants to preserve his native culture by tying ancient Hawaiian wayfinding principles to modern-day science. Nainoa received many awards, including the National Geographic Society's 2017 Hubbard Medal and the National Marine Sanctuaries Foundation's 2016 Lifetime Achievement Award.

Peter Tsai

(b. February 6, 1952)

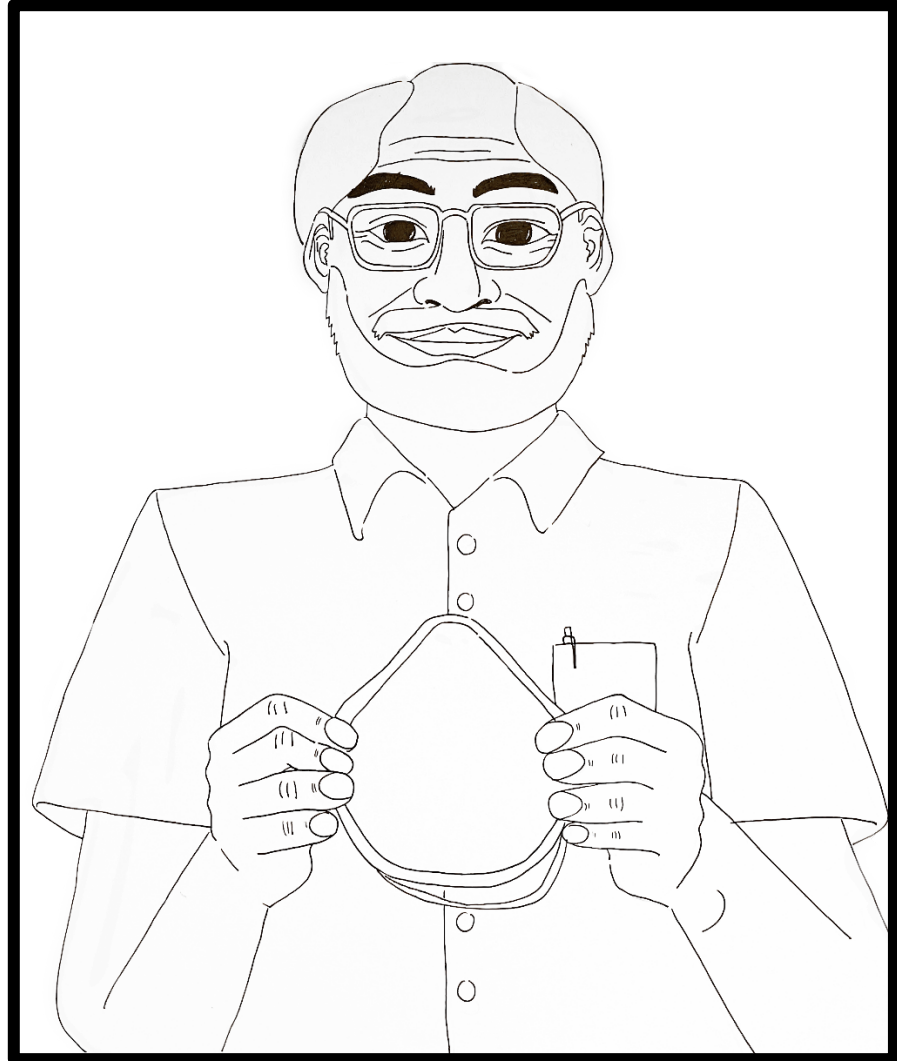
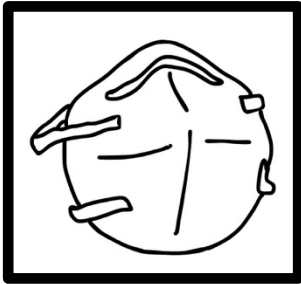
**Professor,
University of
Tennessee**

**Taiwanese
American**

Place of Birth:
Taichung, Taiwan

Invention:

N95 Respiratory
Facial Mask Filter



Qilan Huang (SFSU 2025)

Peter came from a low-income farming family of ten children. He walked miles to school and made his own roller skates from old door rollers. Peter studied chemical fiber engineering in Taiwan. He then moved in 1981 to the United States, where he worked long hours at a fish-and-chips restaurant to earn his doctoral degree in material science at Kansas State University. Peter invented the technology that led to the invention of the N95 respiratory facial mask worn by many people during the COVID-19 pandemic. Peter is the first person to receive the B. Otto and Kathleen Wheeley Award twice.

John Tu

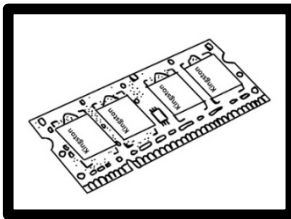
(b. August 12, 1941)

**Businessman,
Philanthropist**

Chinese American

Place of Birth:
Shanghai, China

Invention:
Memory Module



Pia Bacusmo-Rohmer (SFSU 2024)

John grew up in a poor family during the Chinese Civil War. Dissatisfied with Taiwan's education system, he moved to West Germany and earned a degree in engineering. He then moved to California. Together with David Sun, John invented a memory module in a garage. The memory module is an important component of a computer that stores data temporarily. In 1987, the two men founded Kingston Technology. They received the Business People of the Year in 2020 from *Orange County Business Journal*. John has a band called JT and California Dreamin' that plays for charity. He is its drummer.

Tuan Vo-Dinh

(b. April 11, 1948)

Biophysical Chemist

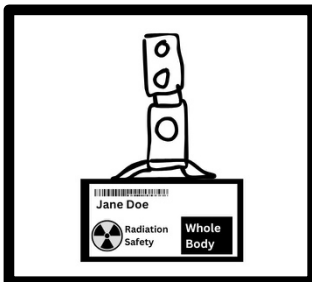
Vietnamese

American

Place of Birth:

Nha Trang, Vietnam

Invention: Chemical
Dosimeter Badge



Haoran Zhou (SFSU 2025)

Tuan grew up in Vietnam, where his parents placed a high value on education, especially science. During boyhood, Tuan made and invented his own toys. At age seventeen, he moved to Switzerland and earned a PhD in Biophysical Chemistry. He later immigrated to the United States. In 1987, Tuan's first invention was a wearable chemical dosimeter badge that detects exposure to toxic chemicals. Tuan can speak five languages: Vietnamese, English, French, German, and Spanish. He holds over thirty patents for his inventions and has received numerous awards for them.

An Wang

(February 7, 1920-
March 24, 1990)

Computer Engineer

Chinese American

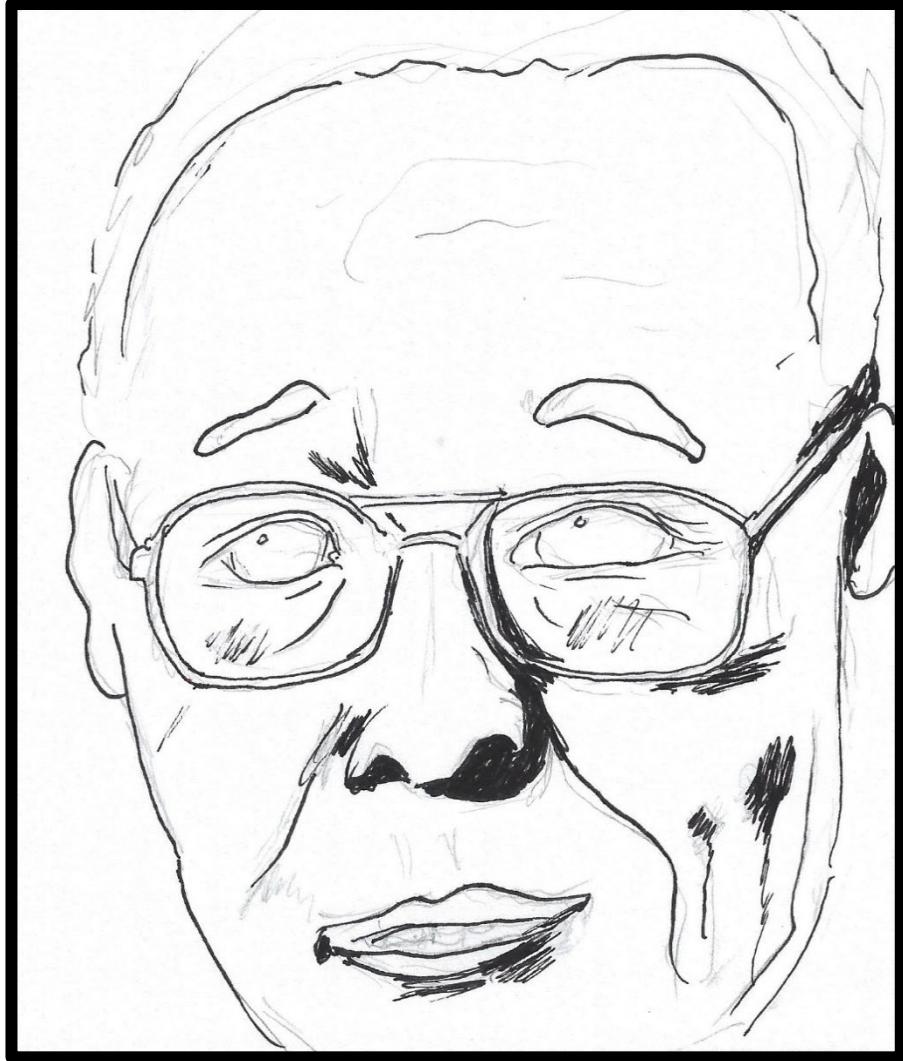
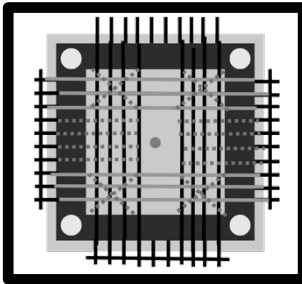
Place of Birth:

Shanghai, China

Place of Death:

Boston, Massachusetts

Inventions: Magnetic
Core Memory;
Magnetic Pulse
Transfer Controlling
Device



Tiffany Hicks-Heistand (SFSU 2025)

An was one of five children raised in a middle-class family. His father was an English teacher, and his mother was a homemaker. In 1945, An went to Virginia for a Chinese engineering program. He later earned a master's and doctorate in applied physics from Harvard University. In 1949, An patented the magnetic core memory and magnetic pulse transfer controlling device (MPTC). The former is the technology and the latter is the controller. Together they allow computers to store data more efficiently and reliably. An held more than 30 patents, had 23 honorary degrees, and was inducted into the National Inventors Hall of Fame in 1988.

Robert Wang
(b. 1964)

Software Engineer

Chinese Canadian

Place of Birth:
Harbin, China

Invention: Instant Pot



Cyann Cabana (SFSU 2025)

Robert moved to Canada in the mid-1990s. He received undergraduate degrees from Indiana University and the University of Washington. Robert and his wife, Tracy, worked full-time in the tech industry. Because of this, they had little time to cook healthy meals for their two children and ordered take-out most of the time. After Robert was laid off from his software engineering job, he invested \$300,000 and used his computer science background to invent the Instant Pot to cook a variety of foods quickly and at different temperatures. The Instant Pot has attracted a cult following since its launch in 2010.

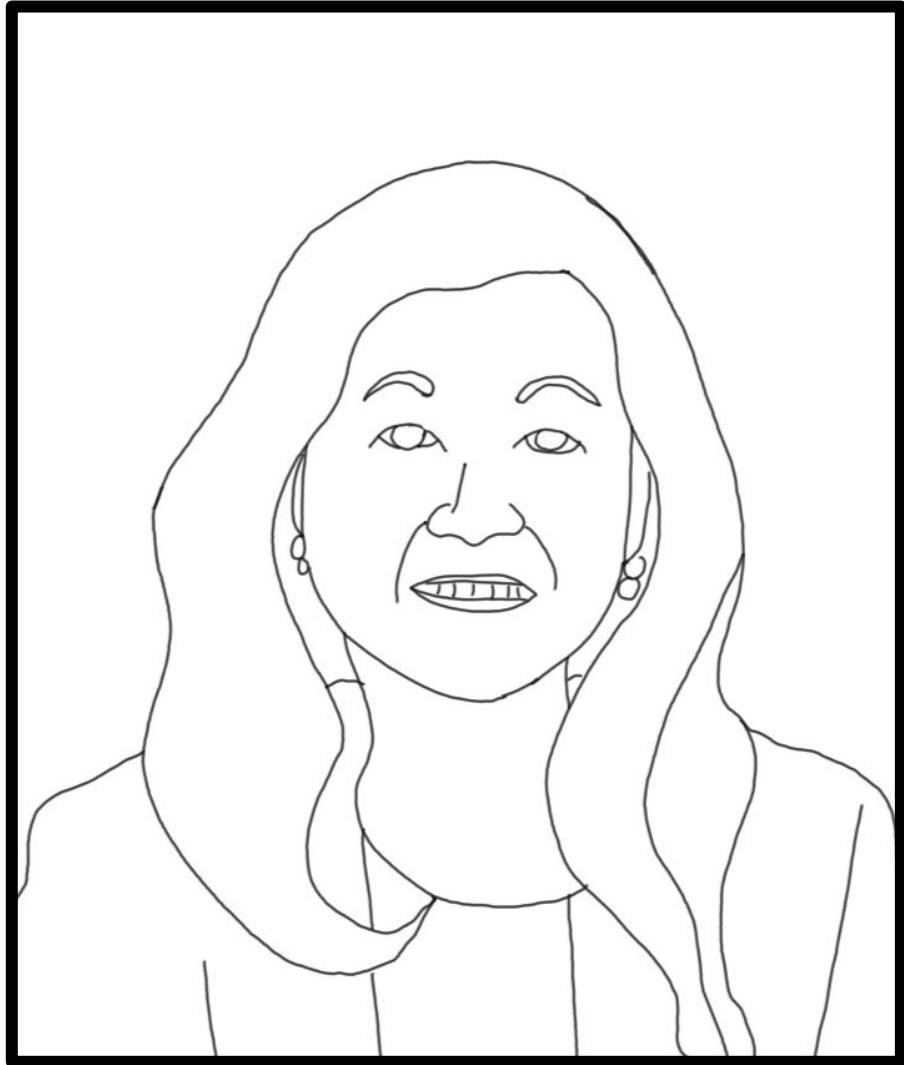
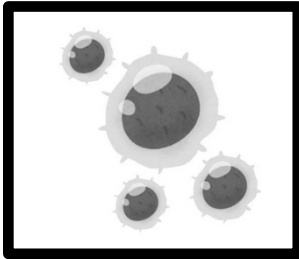
**Ann S.
Tsukamoto
Weissman**

(b. July 6, 1952)

**Stem Cell
Researcher**

Japanese American
Place of Birth:
California

Invention:
Process to Isolate
Blood Stem Cells



Lindsey Lee (SFSU 2025)

Ann was the second of five children and the first in her family to go to college. She received her PhD in Immunology and Microbiology from the University of California, Los Angeles. In 1990, Ann and her husband Irving Weissman discovered and patented a process to isolate human blood stem cells. It enabled bone marrow transplants, helping with metastatic breast and blood cancer treatments. Ann’s later inventions and thirteen patents provided the foundations to help with spinal cord injury, Alzheimer’s disease, and Parkinson’s disease. Her work has influenced advancements in gene therapy and tissue engineering.

**Flossie
Yee Ching
Wong-Staal**

(August 27, 1946-
July 8, 2020)

**Molecular Biologist,
Virologist**

Chinese American

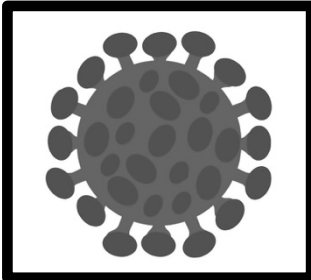
Place of Birth:

Guangzhou, China

Place of Death:

La Jolla, California

Invention: Process to
Clone and Analyze HIV



Richard Choi (SFSU 2024)

Flossie and her family fled China in 1952 during the Chinese Civil War. She attended a Hong Kong Catholic school before leaving at age eighteen to the United States. Flossie graduated from the University of California, Los Angeles with a PhD in Molecular Biology. In 1985, she was the first person to discover HIV virus anatomy. She cloned it, determined how it evades the immune system, and proved HIV is the cause of AIDS. Flossie was selected in 1990 by the Institute of Scientific Information as the top woman scientist of the previous decade. She was inducted into the National Women’s Hall of Fame in 2019.

Chien-Shiung Wu

(May 29-31, 1912-16, 1997)

Nuclear Physicist

Chinese American

Place of Birth:

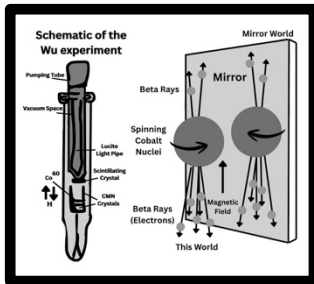
Liuhe, Jiangsu, China

Place of Death:

New York City,
New York

Invention: Wu

Experiment That
Disproved Parity Law



Kouji Agcaoli (SFSU 2024)

Chien-Shiung's mother was a teacher, and her father was an engineer. She was deeply influenced by her father, who advocated women's education and founded a school for girls. In 1936, Chien-Shiung moved to pursue her doctorate in physics at the University of California, Berkeley. In 1956, Tsung-Dao Lee and Chen Ning Yang asked for Chien-Shiung's help to disprove the Parity Law that states the laws of physics should be the same for a system and its mirror image. She invented the Wu Experiment that shattered the Parity Law. The two men received the Nobel Prize in 1957 for their work but not Chien-Shiung. Today, she is recognized as the First Lady of Physics.

InBae Yoon

(July 15, 1936-
December 30, 2014)

**Obstetrics and
Gynecology
Physician**

Korean American

Place of Birth:

South Korea

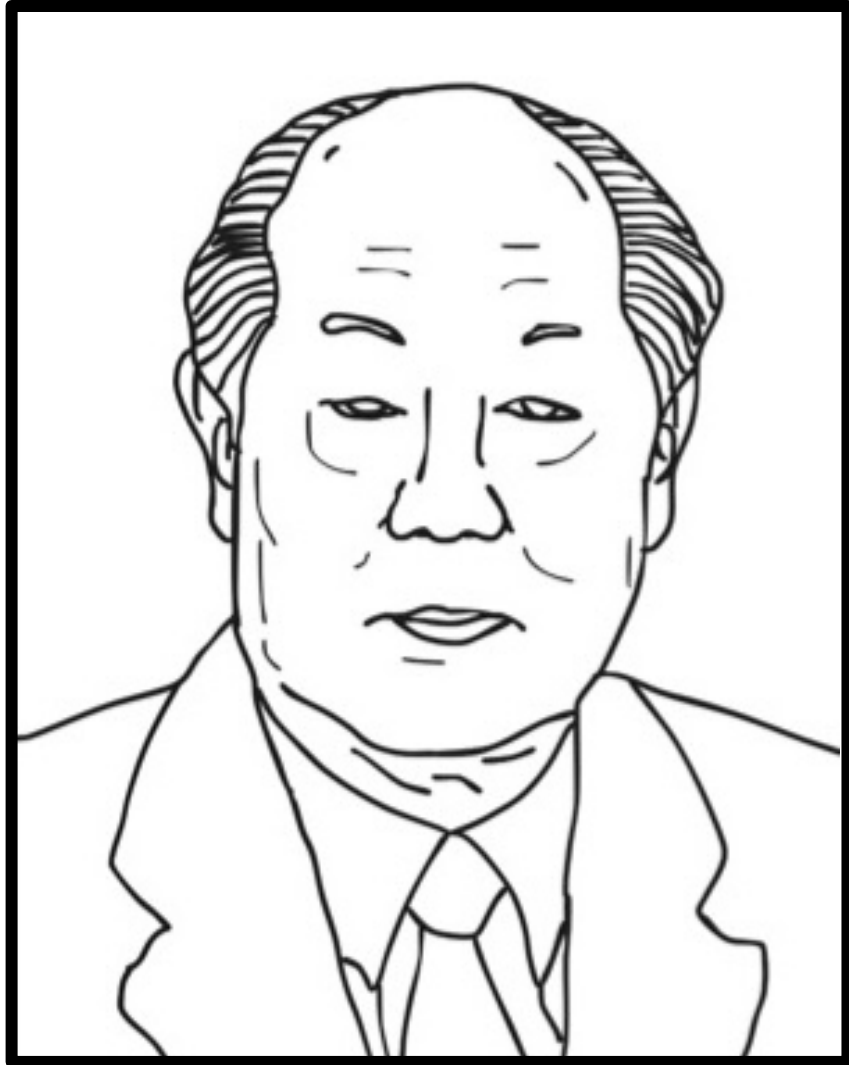
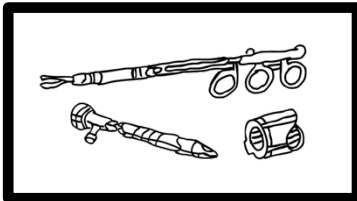
Place of Death:

Ellicott City, Maryland

Inventions:

Surgical Staples;

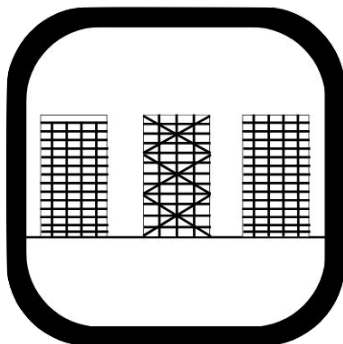
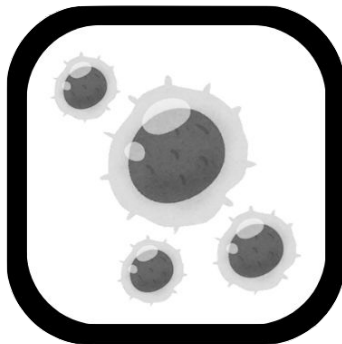
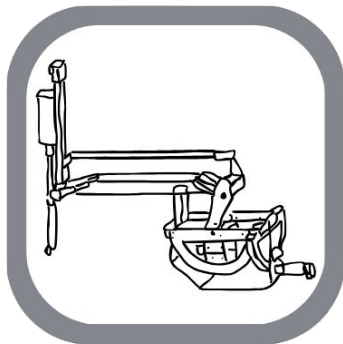
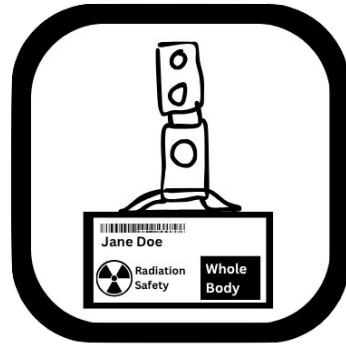
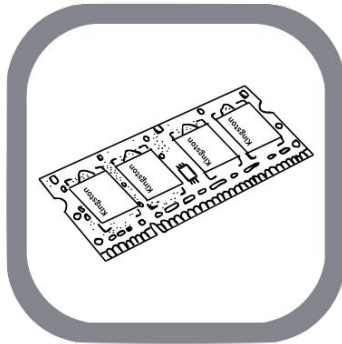
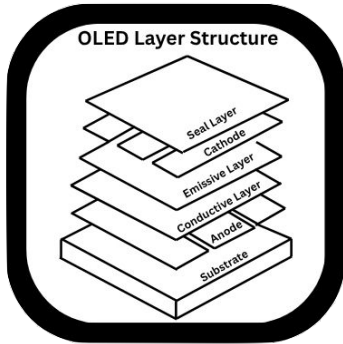
Yoon Ring



Joyce D. Bantugan (SFSU 2025)

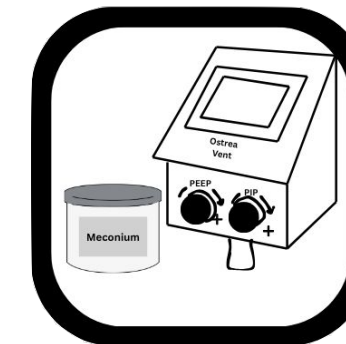
InBae came from an academic family. He and his sister grew up in Korea as orphans in their divided homeland. In his childhood, InBae pretended he could fly and enjoyed building gadgets, once building a toy airplane from recycled materials. In 1963, he immigrated with his wife and settled in Baltimore, Maryland. He began by inventing surgical staples, which increased safety and decreased the time spent on surgical procedures. His first patent was the Yoon Ring used for birth control. InBae held 226 USA patents and 22 international patents, ranging from biomedical devices to laparoscopic equipment and tools.

Activities



Fujita Scale	
F-0	40-72 mph winds
F-1	73-112 mph
F-2	113-157 mph
F-3	158-206 mph
F-4	207-260 mph
F-5	261-318 mph

Enhanced Fujita Scale *In use since 2007*	
F-0	65-85 mph winds
F-1	86-110 mph
F-2	111-135 mph
F-3	136-165 mph
F-4	166-200 mph
F-5	>200 mph



Let's Match!

Instructions: Draw a line connecting the APIA inventors to their place of birth.



Katherine Luzuriaga

InBae Yoon

Flossie Wong-Staal

Peter Tsai

Ann S. Tsukamoto Weissman

Charles Nainoa Thompson



China



California, USA



Hawai'i



South Korea



Taiwan

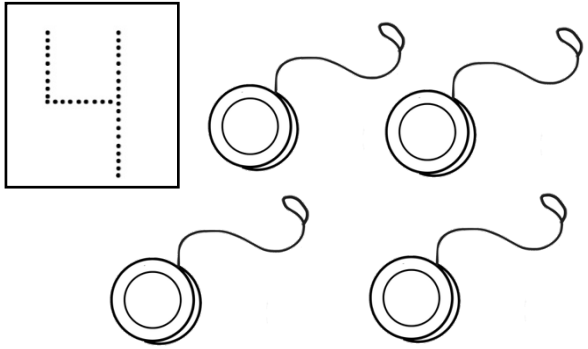
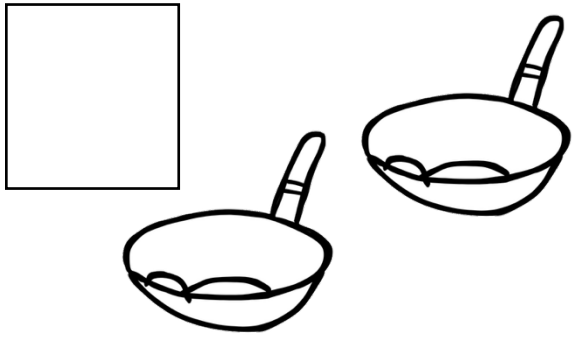
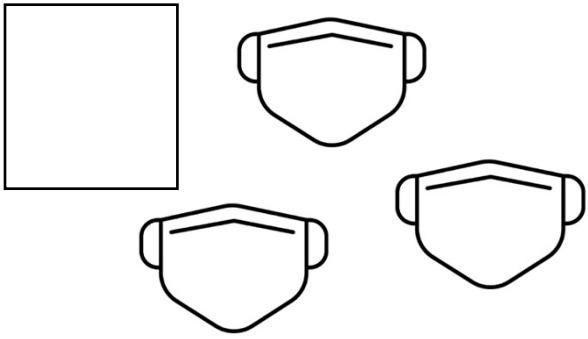
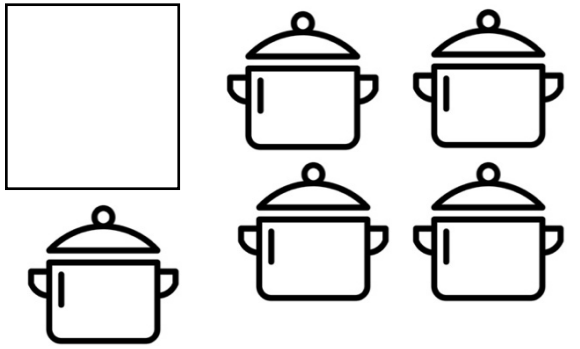
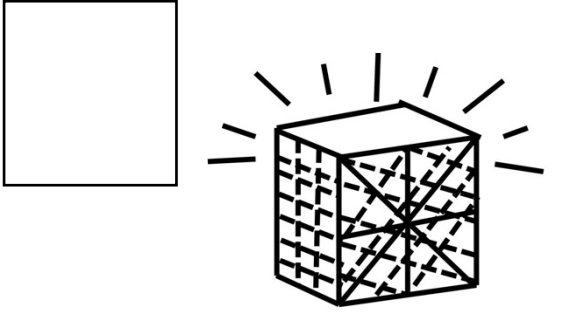
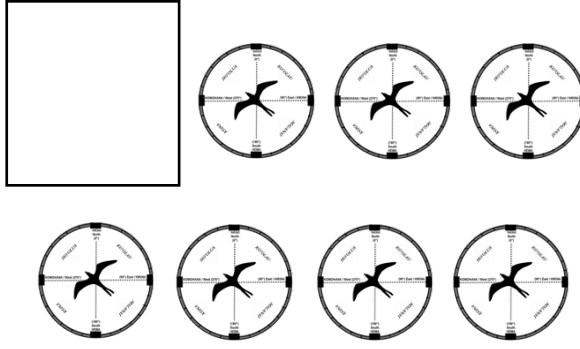


Philippines

Joyce D. Bantugan (SFSU 2025)

Count, Write, and Color the Inventions!

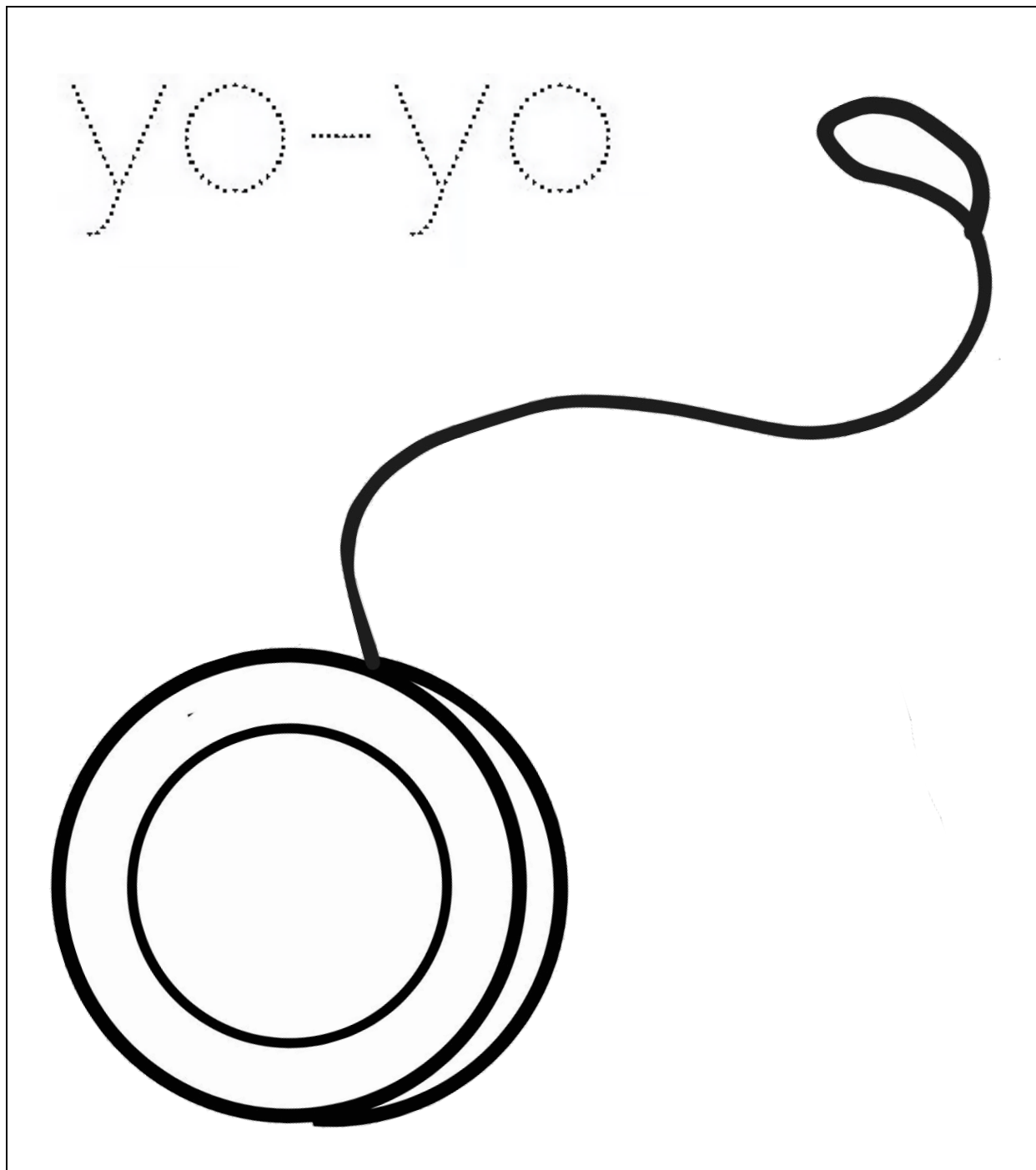
Instructions: Count the Asian American inventions and write the number inside the box.

 <p>Yo-yos by Pedro Flores</p>	 <p>Flat-bottomed Woks by Joyce Chen</p>
 <p>N95 Mask Filters by Peter Tsai</p>	 <p>Instant Pots by Robert Wang</p>
 <p>SolarPuff by Alice Min Soo Chun</p>	 <p>Modern Star Compasses by Charles Nainoa Thompson</p>

Joyce D. Bantugan (SFSU 2025)

Design Your Own Yo-yo!

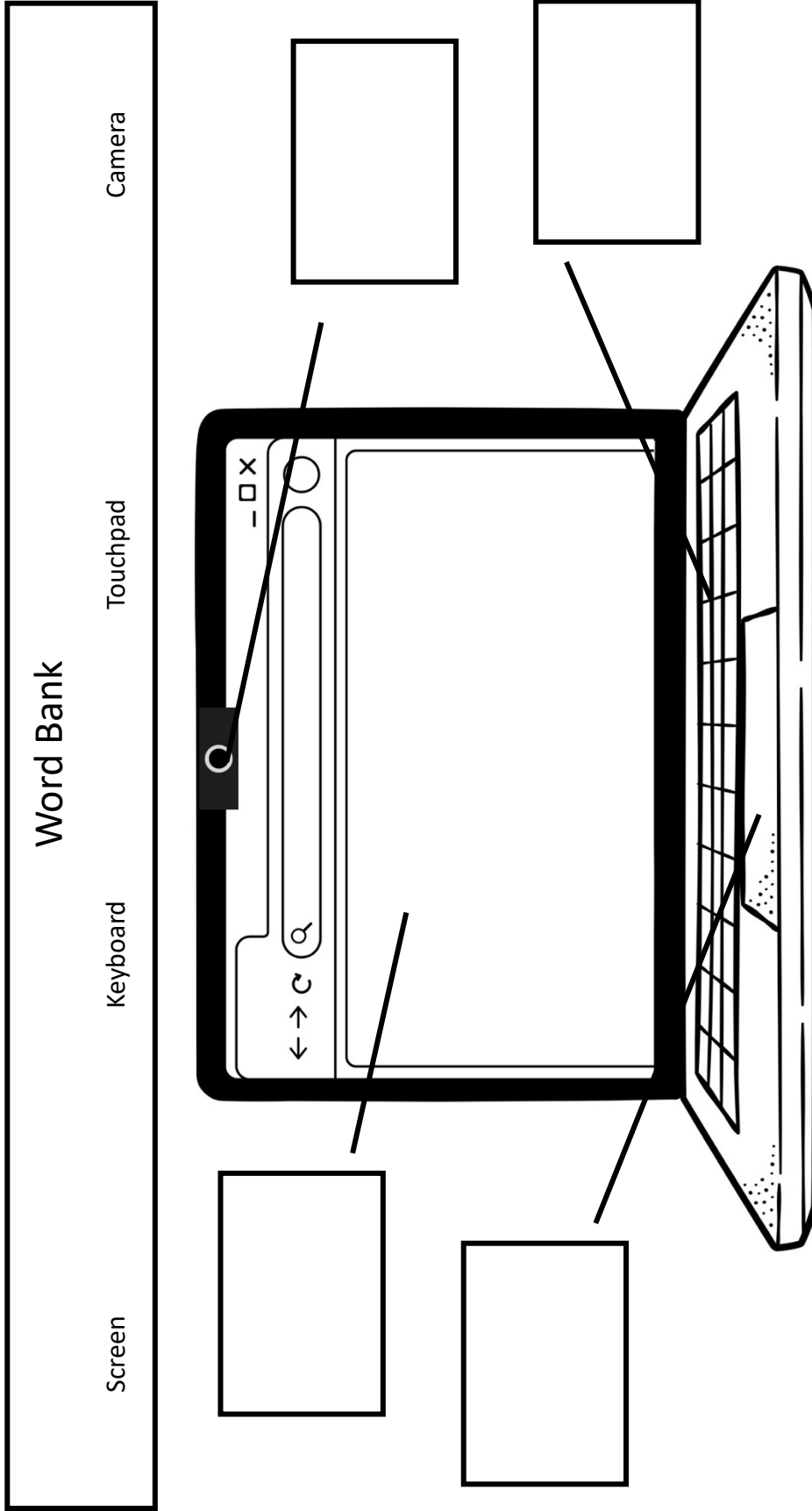
Instructions: Pedro Flores is a businessman and yo-yo maker who is credited with popularizing yo-yos in the United States (read p. 9). Color and create your own yo-yo design!



Joyce D. Bantugan (SFSU 2025)

Computer Parts

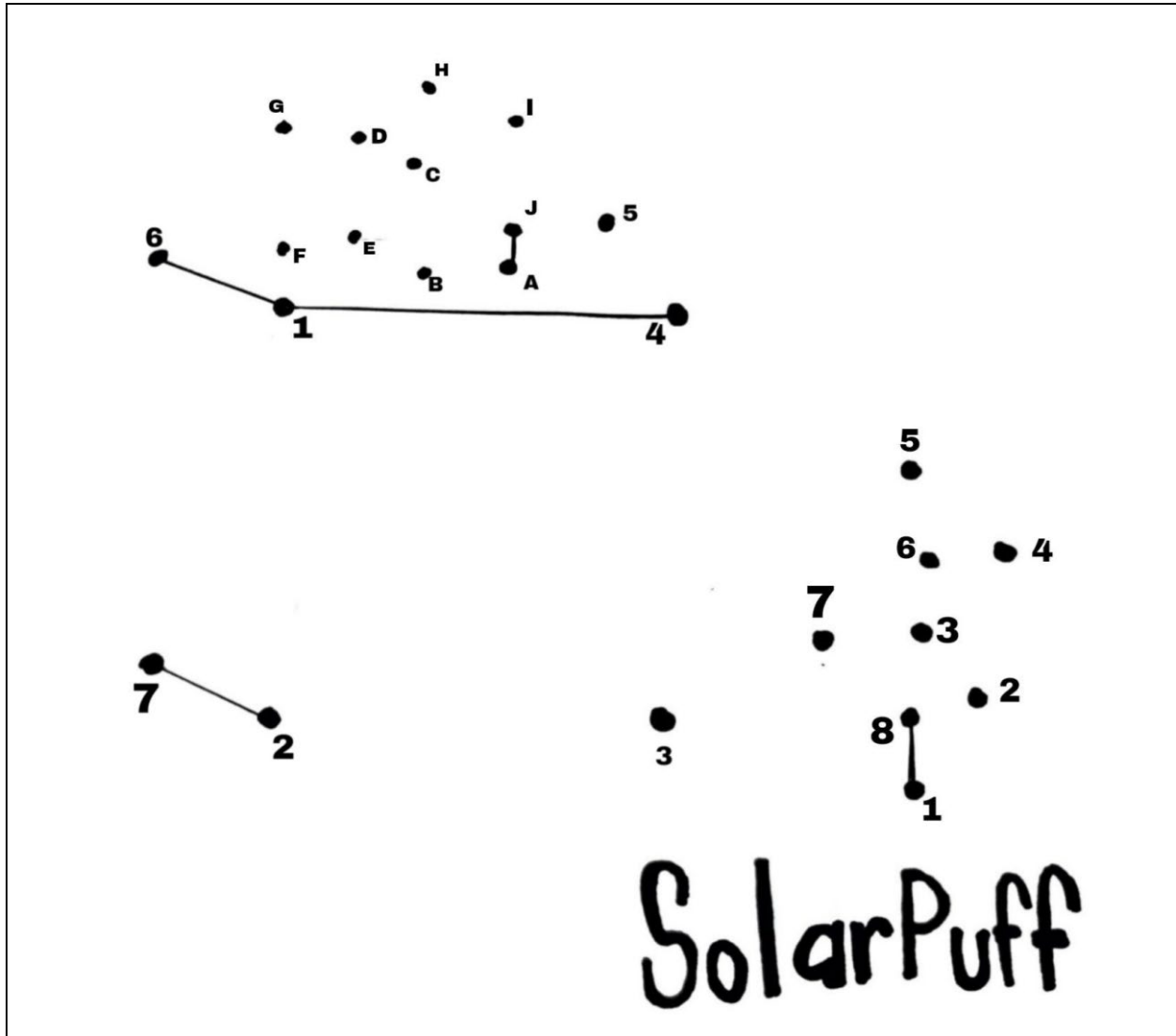
Instructions: An Wang's invention contributed to the advancement of computer technology (read p. 29). Label the parts of a laptop.



Joyce D. Bantugan (SFSU 2025)

Connect the Dots!

Instructions: Alice Min Soo Chun invented the SolarPuff (read p. 8). In this activity, connect the dots in alphabetical and numerical order, then answer the questions below.



What is it used for?

Who do you think it helps?

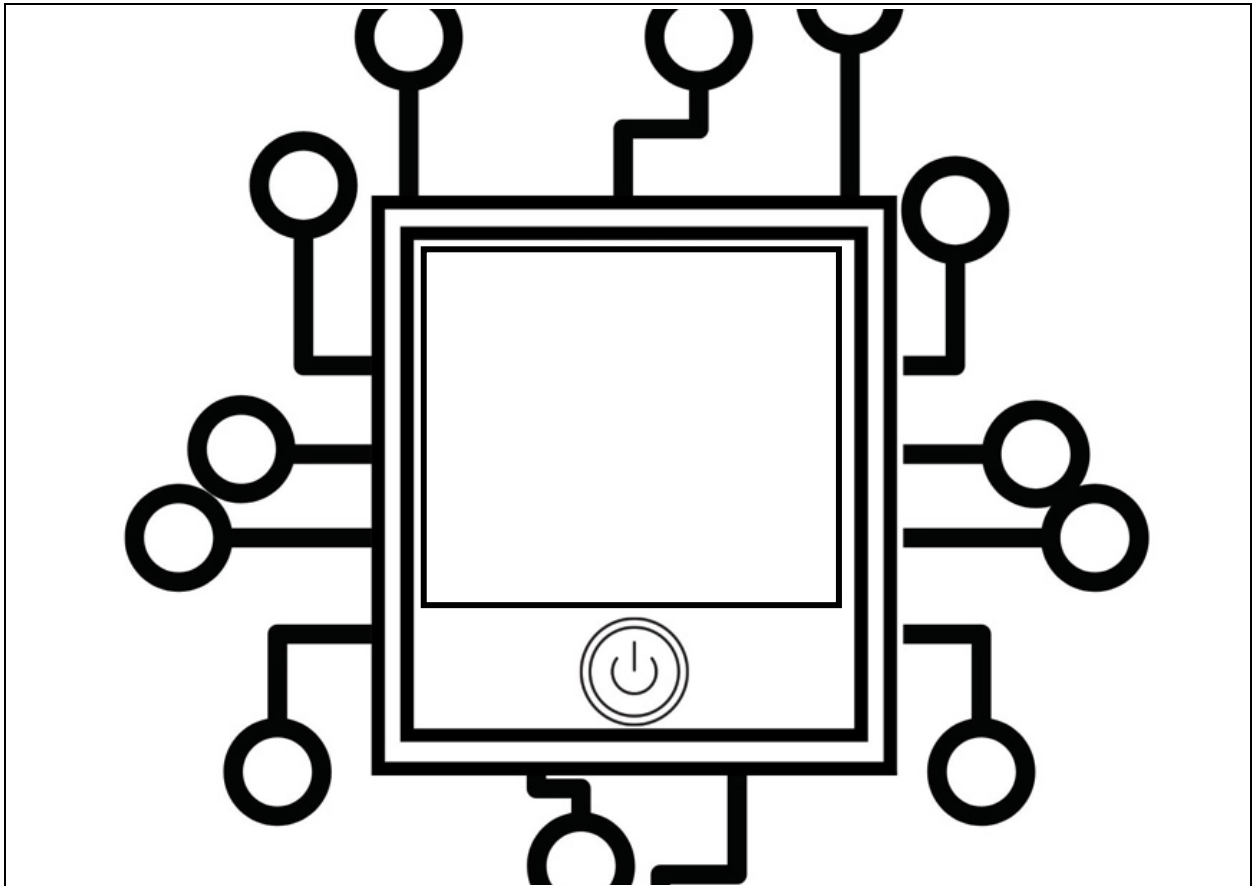
Ricardo Solorzano (SFSU 2025)

Invent a Biosensor!

Inspired by inventor Tuan Vo-Dinh, a biosensor detects dangerous chemicals and keeps people safe (read p. 28).

Instructions:

1. Think of something that might be dangerous (e.g., air pollution).
2. Draw what you think a biosensor looks like and answer the questions below.



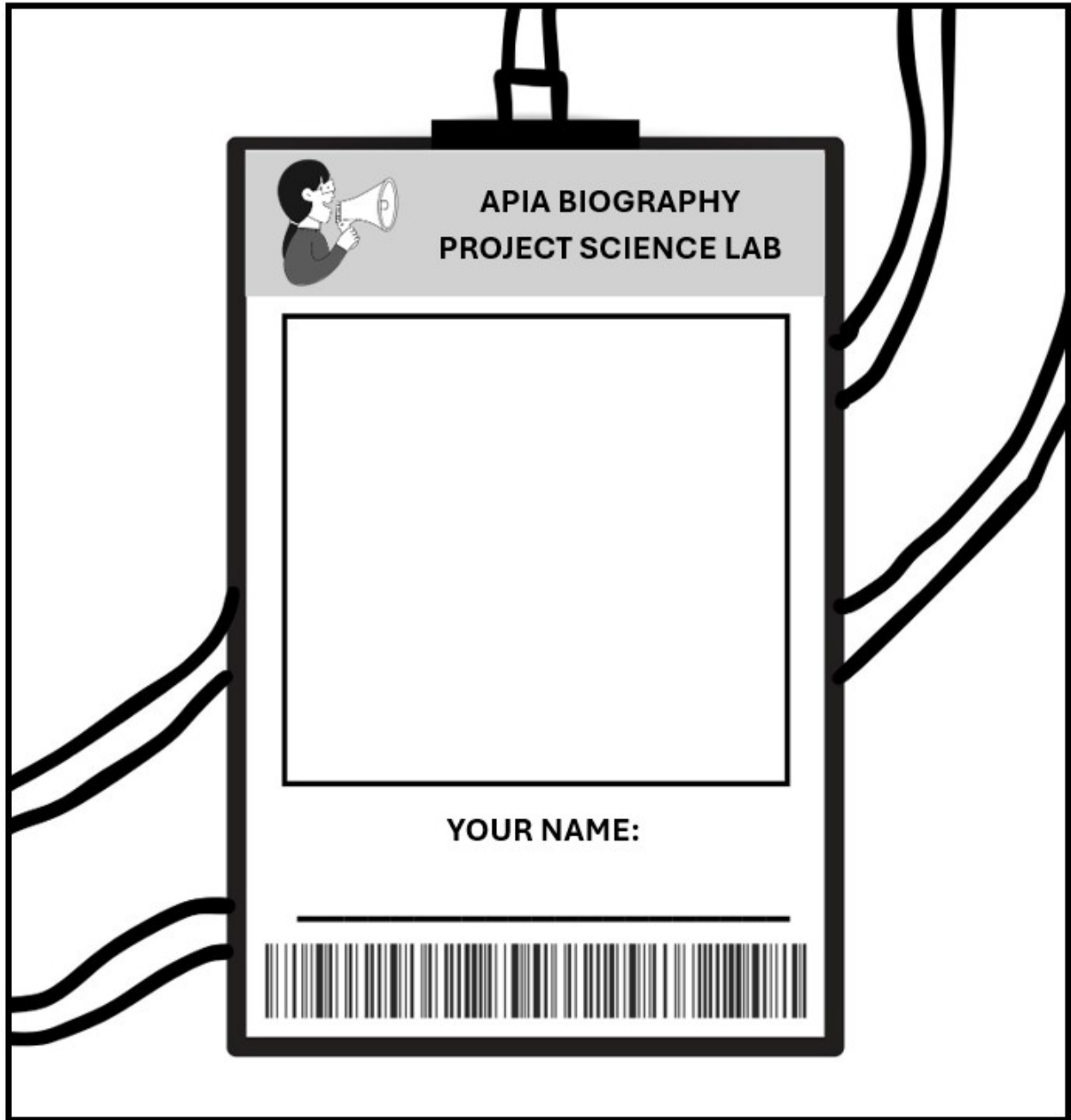
1. What is the name of your biosensor?

2. What danger(s) does your biosensor detect?

Concept by Haoran Zhou (SFSU 2025); adapted by Joyce D. Bantugan (SFSU 2025)

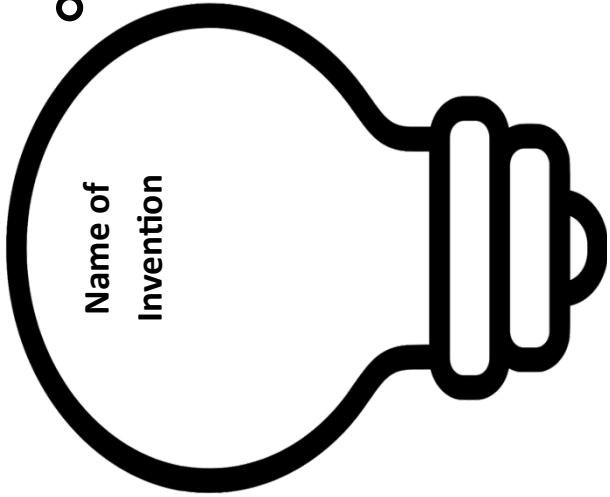
Draw a Scientist Staff Badge!

Instructions: Draw and color yourself as a staff member working in a laboratory!

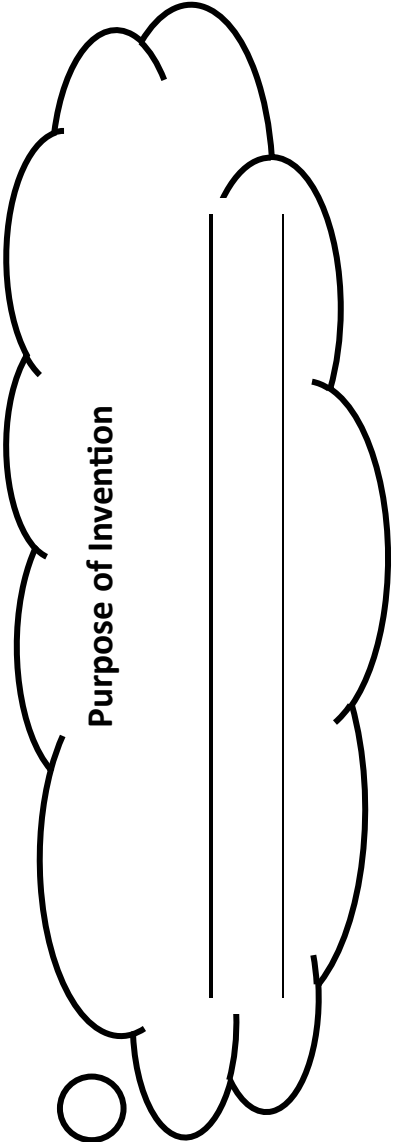


Joyce D. Bantugan (SFSU 2025)

Make an Invention!



Name of Invention



Purpose of Invention

How Does it Work?

Drawing of Invention

Character Traits

Instructions: Choose an inventor from the Wall of Fame. Write their name and draw your own portrait of the inventor in the center of the worksheet. In the six rectangles, write characteristics that describe the inventor.

The worksheet is enclosed in a large rectangular border. In the center is a large circle. Surrounding the circle are six empty rectangular boxes, three on each side. To the right of the circle is a ribbon graphic with two stars on it, intended for the inventor's name.

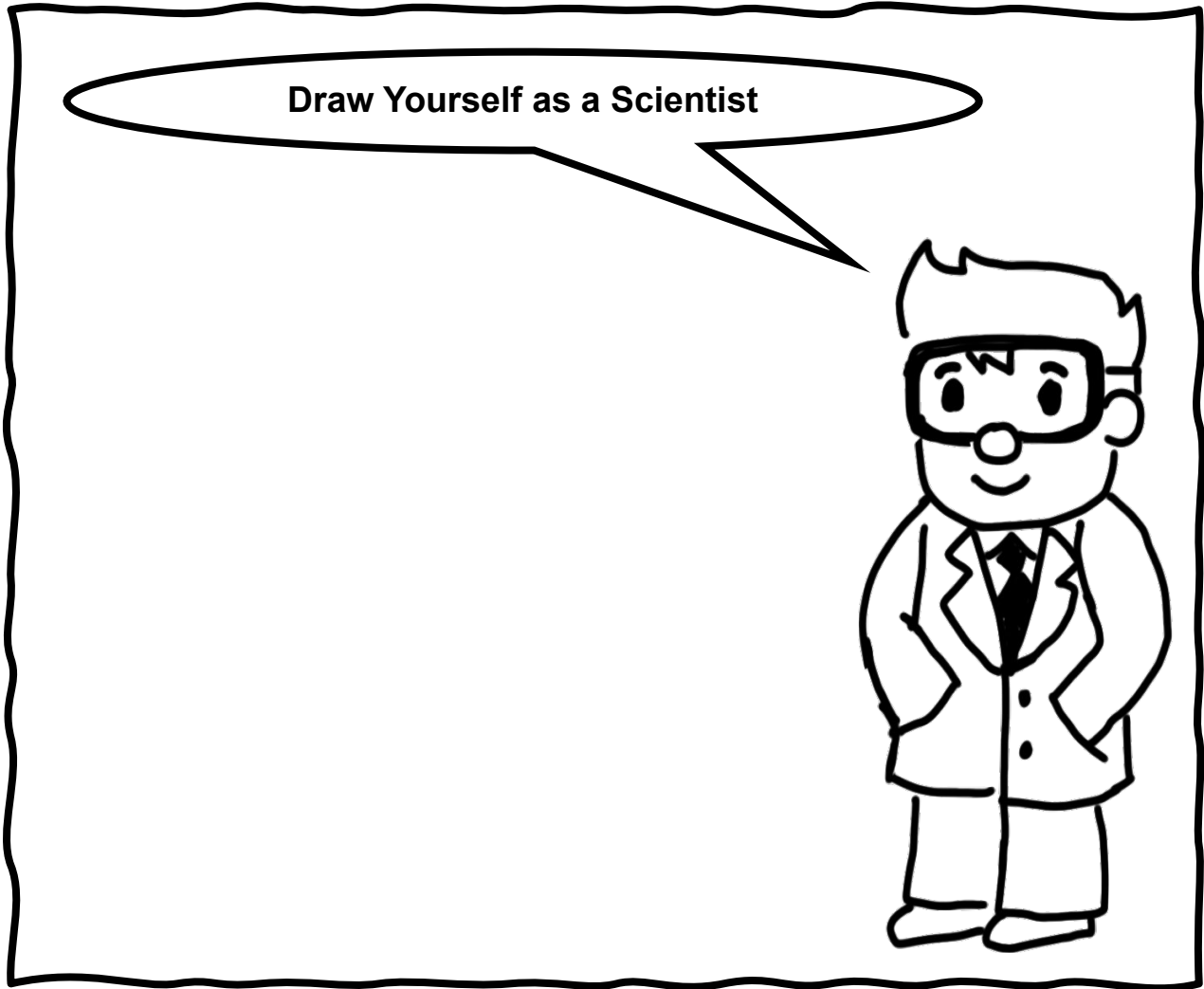
Valentina Melendrez (SFSU 2025)



If I Were a Scientist



What would I do?



If I were a scientist:

Your Future Self

Instructions: Read about the inventors from the Wall of Fame. Reflect and answer the following questions below.

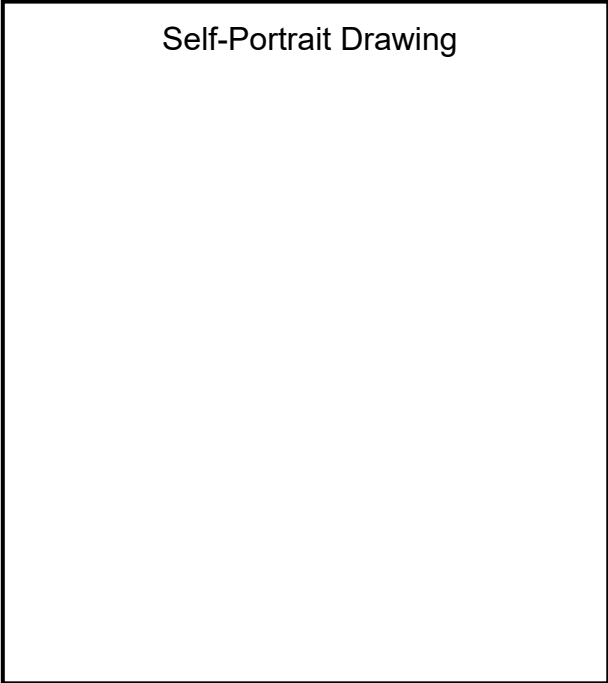
1. Who is your biggest inspiration among our APIA inventors?

2. What are some ways you are similar to our APIA inventors?

3. What do you want to be when you grow up?

4. Draw a self-portrait of yourself in that job.

Self-Portrait Drawing

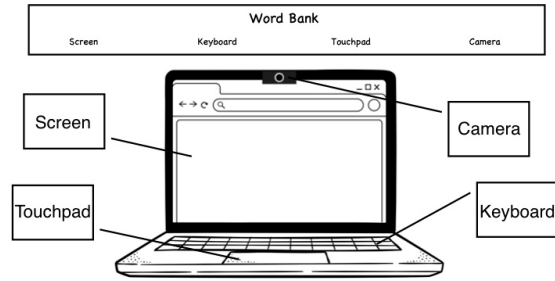


Answer Key

Page 36: Let's Match!

Katherine Luzuriaga	
InBae Yoon	
Flossie Wong-Staal	
Peter Tsai	
Ann S. Tsukamoto Weissman	
Charles Nainoa Thompson	

Page 39: Computer Parts



Page 37: Count, Write, and Color the Inventions!

<p>4</p> <p>Yo-yos by Pedro Flores</p>	<p>2</p> <p>Flat-bottomed wok by Joyce Chen</p>
<p>3</p> <p>N95 Mask Filter by Peter Tsai</p>	<p>5</p> <p>Instant Pot by Robert Wang</p>
<p>1</p> <p>SolarPuff by Alice Min Soo Chun</p>	<p>7</p> <p>Modern Star Compass by Charles Nainoa Thompson</p>

Page 40: Connect the Dots!

