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An illustration of a large aquarium tank. On the left, two people are standing on a viewing platform, looking into the tank. Inside the tank, a large whale is swimming, along with several smaller fish. The tank is filled with water, and the background is a deep purple. The title 'LIVE & LEARN' is written in large, bold, pink letters, with the ampersand in blue. The text is set against a white background that looks like a torn piece of paper.

LIVE & LEARN

► **Help your kids warm up for the new school year (while also having a ton of fun) with our East Bay science, math, and history curriculum.**

YOU'VE LOUNGED BY THE POOL, VISITED ALL THE PLAYGROUNDS, AND PUSHED THE OUTER LIMITS OF SCREEN TIME. NOW WHAT? IT'S PROBABLY TIME TO HELP YOUR KIDS TRANSITION BACK INTO AN EDUCATIONAL FRAME OF MIND. WITH OUR COURSE CATALOG OF MUSEUM EXHIBITS, HISTORICAL PARKS, AND NOTABLE DESTINATIONS, LEARNING FEELS A LOT LIKE PLAYING. SCHOOL'S IN FOR SUMMER.

Department of Math & Physics

ASTRONOMY 101: RETURNING TO THE MOON

Chabot Space and Science Center, Oakland

A full-scale model of NASA's Artemis lunar rover rolled into Chabot in late May. The real Volatiles Investigating Polar Exploration Rover (or VIPER) will head to the moon's south pole in search of ice in late 2023. When visiting the model, kids will learn about lunar water and how it can be used for future space missions. chabotspace.org.



GEOMETRY 201: SHAPES IN NATURE

UC Botanical Garden, Berkeley

This 34-acre garden—one of the largest and most diverse in the United States—boasts more than 10,000 types of plants. Of the about a dozen subject-specific docent-led tours available to kids, Math in the Garden observes the geometric shapes, patterns, and fractals (even Fibonacci numbers!) found in leaves, honeycombs, and cacti and how they help plants to survive. botanicalgarden.berkeley.edu.

PHYSICS 301: THE SCIENCE OF GAMES

The Lawrence Hall of Science, Berkeley

At the new *Well Played!* exhibit, kids learn the math and science of games—and how understanding and using concepts like force, angles, and trajectory can improve their chances of winning. The best part: There's an accompanying arcade where kids can test their new knowledge by playing games such as Skee-Ball, pinball, mini golf, and basketball. lawrencehallofscience.org.



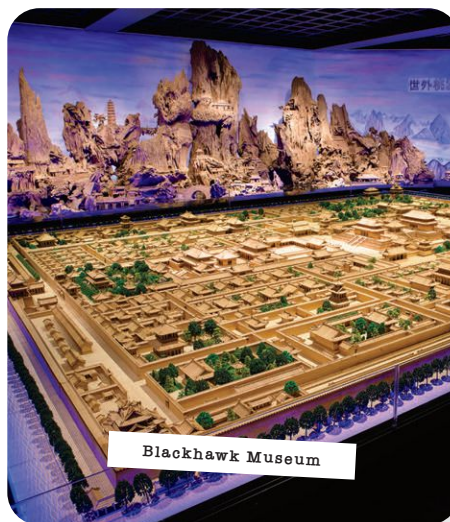
Department of History & Culture

CULTURE 101:

ARTIFACTS OF AFRICA AND ASIA

Blackhawk Museum, Danville

Known for its classic car collection, this museum has more than automobiles. Marvel at ceremonial masks and musical instruments in the *Art of Africa* gallery as well as terra-cotta warriors and a model of the Forbidden City in the *Into China* gallery. blackhawkmuseum.org.



Blackhawk Museum

HISTORY 201:

EARLY 1900s FARM LIFE

Ardenwood Historic Farm, Fremont

See what life was like at the turn of the last century at this preserved and fully functioning family farm. There's a Victorian farmhouse, formal gardens, a blacksmith shop, a hay barn, and a farmyard. Learn how to harvest hay, make rope, and more. ebparks.org.



Ardenwood Historic Farm

HISTORY 301:

WWII MILITARY CRAFT

USS Hornet Sea, Air and Space Museum, Alameda

On this aircraft carrier that served from 1943 to 1970, kids will learn how an airplane can take off from a ship with only a few hundred feet of runway. They'll see more than 15 historic aircraft and exhibits highlighting World War II's Battle of Midway and the recovery of the Apollo 11 and 12 capsules. uss-hornet.org.



USS Hornet Sea, Air and Space Museum

HISTORY 401:

CIVILIANS IN WARTIME

Rosie the Riveter WWII Home Front National Historical Park, Richmond

This park honors the contributions of civilians during World War II. The visitor center offers exhibits and films, the Rosie the Riveter Memorial honors women who worked in the shipyards, and the historic SS *Red Oak Victory* is available for tours. nps.gov/rori.

FIELD TRIPS & OVERNIGHTS

These museums and attractions within 90 minutes of the East Bay are definitely worth the drive.

► CALIFORNIA ACADEMY OF SCIENCES SAN FRANCISCO

This aquarium, natural history museum, and planetarium delights and intrigues with a *Venom: Fangs, Stingers, and Spines* exhibit and a rain forest full of butterflies. Plus, the Penguins and Pajamas Sleepovers are back! calacademy.org.

► EXPLORATORIUM SAN FRANCISCO

These galleries invite kids into specific environments, from living systems to curious contraptions. See a 100,000-toothpick sculpture of San Francisco and thousands of distinct species in an ever-changing bacteria terrarium, Bacteriopolis. exploratorium.edu.

► BAY AREA DISCOVERY MUSEUM SAUSALITO

What kid wouldn't revel in a stocked Mud Kitchen, a woodshop with real tools, and a series of tree houses in the new Gumnut

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Department of Animal Science

ENTOMOLOGY 101:

THE BUZZ ON BEES

Lindsay Wildlife Experience, Walnut Creek

Of the many interesting exhibits at Lindsay, *Hive Alive* is the most mesmerizing. Here, kids can see inside a real beehive enclosed in plexiglass (but connected to the outside) where thousands of honeybees and their queen work away the day. Visitors will learn about the life cycle and various roles of bees as well as their importance in our food chain. lindsaywildlife.org.

ZOOLOGY 201:

AGRICULTURAL ANIMALS

Tilden Little Farm at Tilden Nature Area, Berkeley

From how to milk a cow to how to turn sheep's wool into a sweater, kids learn about what life is like on a working farm at this historic 1955 attraction, which also boasts rabbits, goats, pigs, and chickens. Bonus: Bring lettuce or celery, and you can feed many of the animals during your visit. ebparks.org.

ZOOLOGY 301:

CALIFORNIA SPECIES

Oakland Zoo, Oakland

How far can a mountain lion leap? Does the wolf deserve its bad reputation? And why hasn't the grizzly bear, featured on our state flag, been spotted in the wild here since 1924? At the Oakland Zoo's California Trail expansion, kids will dive deep into the native animal and plant habitats of California and their stories of change. oaklandzoo.org.



Department of Earth Science

GEOLOGY 301:

ALL ABOUT MINING

Black Diamond Mines Regional Preserve, Antioch

Visit the Hazel-Atlas Mine, which produced silica sand for making glass jars and bottles from the mid-1920s to the mid-1940s, and see ore chutes, mining tools and carts, and many geological features. Then tour a replica coal mine, and learn about the dangers of working deep in the earth. Note: Participants must be at least seven years old. ebparks.org.

ECOLOGY 301:

THE SAN FRANCISCO BAY

Doug Siden Visitor Center at Crab Cove and Aquarium, Alameda

Enter the visitor center to learn about the interdependence between marine life and shore life via exhibits, hands-on activities, and an 800-gallon aquarium. Then head to the foot of McKay Avenue to see the estuarine marine reserve or join a naturalist-led program highlighting species like grunions, making crafts, or picking up trash. ebparks.org.

ENVIRONMENTALISM 401:

PRESERVING PUBLIC LANDS

John Muir National Historic Site, Martinez

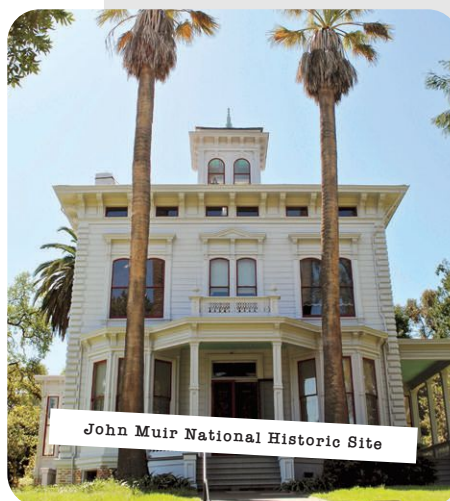
Walk in the footsteps of environmentalist John Muir, who cofounded the Sierra Club and whose activism earned him the nickname "Father of the National Parks." Take a tour of Muir's home, the 17-room Victorian mansion built in 1882 by his father-in-law, and wander through the oak and grasslands of Mount Wanda, where Muir hiked with his daughters. nps.gov/jomu.



Black Diamond Mines Regional Preserve



Doug Siden Visitor Center at Crab Cove and Aquarium



John Muir National Historic Site

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Grove? Plus, the café has entrées shaped like rocket ships and butterflies.

bayareadiscoverymuseum.org.

► COMPUTER HISTORY MUSEUM MOUNTAIN VIEW

For kids who know their way around smartphones, these old calculators and clunky computers are bound to be fascinating. Plus, see vintage game consoles and step inside a supercomputer. computerhistory.org.

► CALIFORNIA STATE RAILROAD MUSEUM SACRAMENTO

From toy trains to steam locomotives, this is the place to be for any train-loving kid. Learn about the famed golden spike (and see it, too!), go inside dining and sleeping cars, and take a real train ride along the Sacramento River. californiarailroad.museum.

► SAFARI WEST SANTA ROSA

This 400-acre wildlife preserve evokes the spirit of the Serengeti, with bumpy safari rides to see rhinos and giraffes, a walk-through aviary, and luxury tent camping, where you'll be lulled to sleep by a variety of animal sounds. safariwest.com.