



Walk Through The STORY OF TIME AND LIFE

To learn more about this exhibit and see it, fully transcribed, on-line, with a list of references, go to www.ccsf.edu/TimeLife.

This project was developed by the CCSF Earth Sciences Department based on and incorporating materials from the California Academy of Sciences (CAS). This exhibit is possible thanks to the help of many throughout the CCSF community.

While the exhibit is free and open to the public, its funding sources are through private donations. Please consider making a donation through our website.

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Photo of Deinonychus Models from California Academy of Sciences ©

The Walk Through **The Story of Time and Life** begins in the south basement lobby of the Science Building. The walls with exhibit panels and posters are marked by **Dinosaur Footprints along the floor!**

Ga = Billions of years ago Ma = Million of years ago
Ka = Thousands of years ago

Find below the content displayed on various walls within the building. See **Exhibit Map (on back)** to locate the walls referred to below.

PART I: Basement Level (Engineering & Earth Sciences) – South to North South Entrance Basement Lobby

WALL#	FOSSIL GALLERY AND KICKOFF
A	Fossil: <i>Dimetrodon</i>
B	Panels: Introduction to the Exhibit; Mammoth or Mastodon; Contributions Fossils: Elephant Footprint, Mosasaur tooth, California Marine Fossils, Leaf Imprints Banners: Welcome Banner, Footprints Banner
C	Poster: What is A Fossil?
D	Fossil: <i>Plesiosaur</i> Rocks and Minerals: Geology and gemology displays (side visit)
E	Fossil: Dinosaur Footprints
F	Fossils: <i>Dilophosaurus</i> , <i>Ichthyosaur</i> , <i>Plesiosaur</i>
G	Fossil: Early large jawed fish (<i>Xiphactinus</i>)
H	Panels: Rock Clock; It's All Relative
I	Mural: Eocene Whales

WALL#	The Walk Begins
K	Panels: 13.7 Ga Big Bang; Universe Lets Light Shine; 12.7 Ga Galaxy Era Photos: Max Planck; Einstein Posters: Hubble Ultra Deep Field; Galaxies
L	Panel: 5 Ga Solar System Formation Posters: Universe; Periodic Table of Elements; Scaled Solar System; 4.6 Ga The Sun
M	Posters: The Aurora; The Earth
N	Panel: Remnants of the Past Posters: Meteorites; Earth's Structure Meteorites: All kinds! *Samples: Earth Science Club exhibit
O	Panel: 4.6 Ga Earth Formation
P	Panel: 4.5 Ga Moon Formation Poster: Moon
Q	Poster: Scaled Earth Layers
R	Panels: Early Atmosphere; 4.4 Ga When Things Got Hard; 4.4 Ga The Great Flood; Curtain Rises On Life
S	Poster: Earth's Surface Today

WALL#	First Floor (Physics) – North to South
A	Panel: Plate Tectonics
B	Panel: Convection; Layers of Earth; Kinds of Plates
C	Panel: Plate Boundaries; Plate Tectonics Through Time NOTE: Visit Earthquake Hall, our Seismograph, and other Physics displays in the main hall as you travel to the end of the hallways and the continuation of our story!
D	Panels: First Evidence; 3.8 Ga The First Spark of Life; 3.5 Ga Stone Blankets; 3.5-2 Ga The Great Rust Storm (Banded Iron Formations) Poster: Geologic Time Fossils: Stromatolites and Banded Iron Formations
E	Panels: 2.2 Ga Eukaryotes; 1.4 Ga Green Planet (+ Errata) 1.2 Ga Rodinia: The First Supercontinent

WALL#	Second Floor (Chemistry) – South to North
A	Panel: 600 Ma Ediacaran Garden
B	Panels: 600 Ma Soft Body, Hard Body; Old Softies; 550 Ma Development of hard parts: The Hard Facts; Sticking To Basics
C	Panels: 530 Ma Blueprint For Backbones Panel 520 Ma First Vertebrates (A Little Backbone) 500 Ma First Arthropods (Leg Up On Evolution) 475 Ma North America Margin Subducts Fossils: Ammonites, Brachiopods, and Trilobites
D	Panels: 430 Ma First life on land – plants! (Happy Landings) First jawed vertebrates (Jaws) 425 Ma First animals on land: Arthropods, like scorpions (Patter of Little Feet) 400 Ma – First lunged vertebrates (Breath Of Fresh Air) First jawed fishes – such as sharks (White Death, Skin and Bones; From Fins To Limbs) 380 Ma – Improved fins (Something Fishy) 370 Ma A New Leaf 350-290 Ma Fuel Forests Coal samples: Coal, in varying degrees of formation
E	Mural: Early life on land
F	Panels: 300 Ma First Dragonflies, nonfolding wings (Winging It) First Amniotes (Have Eggshell Will Travel) Synapsids and Reptiles (A Hole In the Head) First Cycads: palm-like plants (Seeds of Change) 245 Ma Major extinction event ends the Paleozoic (Here Today Gone Tomorrow) Flood Basalt Extinctions
G	Poster: 245-65 Ma The Age of the Dinosaurs!

WALL#	Third Floor (Biology) – North to South
A	Panels: 240 Ma – First seed-bearing plants (Going To Seed) 235 Ma – First Upright Dinosaurs (Up And At 'Em), Pterosaurs with leathery wings (Flying Fingers), Learn how footprints are fossilized (Good Impressions), Learn what dinosaurs look like (A New Look).
B	Panels: 235 Ma – First Ichthyosaurs (see Basement Ichthyosaur Fossil!) 230 Ma – First Amphibians (Water Babies) 225 Ma – Pangaea Formation (also see Plate Tectonics Section on Floor 1) 220 Ma – First Crocodylians (In A While, Crocodile) 215 Ma – First Plesiosaurs (see Basement Plesiosaur Fossil!) 160 Ma – First Sauropods: (Four On The Floor) 152 Ma – First Birds: (Birds Are Dinosaurs) 145 Ma – First Mammals (If The Shrew Fits) Skeletons: Shrew skeleton and rodent skulls
C	Panels: 140 Ma – First carnivorous 'saurs (Crunchers & Munchers) 110 Ma – First Deinonychus: large sickle-shaped claws used for slashing prey (Terrible Claw)
D	Panels: Out of the Woods 100 Ma – First marine lizards (Last One In The Water) 95 Ma – First horned dinosaurs (Thundering Herds) Fossil: Triceratops tooth
E	Panels: 75 Ma – First Maiasaura (Good Mother Dinosaur) 71 Ma – First Tyrannosaurus Rex (Face To Face) Review how we determine these ages (It's All Relative) 65 Ma – Dinosaurs go extinct (End Of The Line) Flood Basalt Extinctions Bird and Mammals advance (Land Of Opportunity) Poster: 65 Ma onward – The Age of Mammals
E*	Mural: Dinosaurs in the Forest
F	Panels: 63 Ma – First Primates (Monkey Puzzle) 55 Ma – First grazing teeth in mammals (Grass Guzzlers; Sea of Grass) Samples: Tooth evolved to eat grass; Grass sample
G	Panels: 50 Ma – First whales (Warm Blood, Cold Water); California Cat 25 Ma – A Crack Spreads Across California 12 Ma – First Horned Rhinos (Headlines) 2 Ma to today – Ice Ages 400 Ka – Formation of San Francisco Bay 10-25 Ka – Wisconsin Ice Age (A Bridge is Crossed)
H	Panel: 2-4 Ma – Ancient Hominids
I	Panels: 1800s and today – San Francisco Estuary Life Elsewhere in the Universe? Poster: Carl Sagan's Cosmic Calendar