



2016 Summer Enrichment Reading & Activities

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ARTS

DANCE

Books / Reading

- *The Creative Habit* by Twyla Tharp
- Website: The Dance Enthusiast www.dance-enthusiast.com (New York Dance Journal that includes video interviews, writing, and more) - **PARENT WARNING: may have some nudity**
- Website: In-Dance dancersgroup.org/indance (San Francisco Dance Journal with online archives and link to calendar performances)

Classes / Camps

- Shawl Anderson Studio in Oakland – www.shawl-anderson.org/youthintensives.htm
- ODC Dance in San Francisco – odcdance.org
- Motion Pacific in Santa Cruz – www.motionpacific.com

Shows / Exhibits

- ODC Dance Performance – www.odcdance.org

Movies

- Jacob's Pillow Video Archives danceinteractive.jacobspillow.org (online video archives)
- *First Position* (available on netflix)
- *Fame High* (available on netflix)

MUSIC

Books / Reading

- *The Inner Game of Music* by Barry Green
- *Musicophilia* by Oliver Sacks
- *Imperfect Harmony* by Stacy Horn

Classes / Camps

- SMV Vocal Jazz Camp (July 18-22) - www.vocaljazzcamp.com/san-jose-california

Shows / Exhibits

- Cabrillo Festival of Contemporary Music (July 31-August 13) - cabrillomusic.org
- Carmel Bach Festival (July 13-30) - www.bachfestival.org

Movies

- *Amadeus*
- *The Singing Revolution*
- *Young At Heart* (Documentary)
- *Standing in the Shadows of Motown*

ARTS

- *This Is It*
- *20 Feet From Stardom*
- *Muscle Shoals*

THEATER ARTS

Books / Reading

- *A Challenge for the Actor* by Uta Hagen
- *An Actor Prepares* by Constantine Stanislavski & Elizabeth R. Hapgood
- *Building a Character* by Constantine Stanislavski & Elizabeth R. Hapgood
- *Sanford Meisner on Acting* by Sanford Meisner & Dennis Longwell (Contributor)
- *The Art of Acting* by Stella Adler
- *Improvisation for the Theatre 3E* by Viola Spolin
- *Impro: Improvisation and the Theater* by Keith Johnstone
- Any plays, including those listed in the "Movies" section below

Classes / Camps

- West Performing Arts – westperformingarts.com

Shows / Exhibits

- Santa Cruz Shakespeare – www.santacruzshakespeare.org
- Cabrillo Stage – cabrillostage.com
- West Performing Arts – westperformingarts.com

Movies

- *Hamlet*
- *Importance of Being Earnest*
- *Shakespeare Behind Bars*
- *Pygmalion*
- *The Crucible*
- *Glass Menagerie*
- *A Raisin in the Sun*
- *All My Sons*
- Any Musical
- Any Shakespeare show

VISUAL ARTS

Books / Reading

- *Creativity* by Mihaly Csikszentmihalyi
- *Creating* by Robert Fritz
- *Keys to Drawing* by Bert Dodson (a great drawing book for beginners)

ARTS

- *The New Drawing on the Right Side of the Brain* by Betty Edwards (a classic – the techniques work)
- *The Art of Urban Sketching: Drawing on Location Around the World* by Gabriel Campanario (start a sketchbook during your summer travels, more info at www.urbansketchers.org)
- *The Art Spirit* by Robert Henri (enjoyable and inspiring – you'll gain insight on art and life in addition to useful tips for artists)

Classes / Camps

- Camp Tannery Arts (through age 13) – www.camptanneryart.com
- Santa Cruz Art League (drawing, pastel, painting, and figure sketching for adults and dedicated high school art students) – scal.org
- Cabrillo College Extension (workshops and art camps for middle and high school students) – cabrillo-extension.org

Shows / Exhibits

- Santa Cruz Museum of Art & History – www.santacruzmah.org
- Monterey Museum of Art – www.montereyart.org
- Legion of Honor, SF – legionofhonor.famsf.org
- de Young, SF – deyoung.famsf.org
- Cantor Arts Center at Stanford University – museum.stanford.edu

Movies

- *David Hockney: A Bigger Picture*

ENGLISH

ALL GRADES

Activities / Experiences

- Speakers at the Santa Cruz Bookshop - www.bookshopsantacruz.com/event
- Visit the National Steinbeck Center in Salinas - www.steinbeck.org
- Attend a Santa Cruz Shakespeare play – www.santacruzshakespeare.org

MIDDLE SCHOOL

Books / Reading

- *The Uglies* by John Westerfeld
- *Baseball in April* by Gary Soto
- *The Fault in Our Stars* by John Green
- *Stargirl* by Jerry Spinelli
- *Armageddon Summer* by Jane Yolen and Bruce Coville
- *Feed* by MT Anderson
- *The Life of Pi* by Yann Martel
- *The Book Thief* by Markus Zusak
- *The Once and Future King* by T.H. White
- *The Adventures of Tom Sawyer* by Mark Twain

Activities / Experiences

- **6th Grade:** Collect oral stories from friends/family members, sew/embroider something, think about the role you place in your family (as an only child/eldest sibling/only girl/etc.), research child labor laws around the globe, research Rafael Trujillo, notice farm land and people picking produce
- **7th Grade:** Take a hike, research the Cold War/McCarthyism, read a few Ray Bradbury short stories, visit Manzanar internment camp, observe people of various nationalities and what their community is like
- Go to a public library and ask a librarian for a non-fiction or fiction book recommendation based on *your* specific interests. These interests do not need to have anything to do with literature (ex: motocross, crafting, Minecraft, Coco Chanel, etc.). Check out at least one of the recommended books.
- Spend at least 20 minutes perusing one or more of the following websites and come up with a list of 3 books that you're interested in reading:
ForeverYoungAdult.com
NYTimes.com/pages/books
Goodreads.com

Movies

- Watch the movie version of a book you've read (ex: *The Fault in Our Stars*)
Think about: What changed in the transition from page to screen? Were the important themes and motifs from the books apparent in the film as well? What added elements affect or alter the story (ex: soundtrack, casting choices, etc.)?

ENGLISH

HIGH SCHOOL

Books / Reading

- *Why We Broke Up* by Daniel Handler
- *Feed* by MT Anderson
- *The Life of Pi* by Yann Martel
- *The Book Thief* by Markus Zusak
- *The Once and Future King* by T.H. White
- *The Adventures of Tom Sawyer* by Mark Twain
- *Catfish and Mandala* by Andrew X. Pham
- *Travels with Charley* by John Steinbeck
- *Song of Solomon* by Toni Morrison
- *Love in the Time of Cholera* by Gabriel Garcia Marquez
- *The Odyssey* by Homer
- *Bless Me, Ultima* by Rudolfo Anaya
- *Kindred* by Octavia Butler
- *White Noise* by Don DeLillo
- *A Visit from the Goon Squad* by Jennifer Egan
- *Barrio Boy* by Ernesto Galarza
- *Keepers of the House* by Shirley Ann Grau
- *Ironweed* by William Kennedy
- *Interpreter of Maladies* by Jumpa Lahiri
- *Quicksand* by Nella Larsen
- *Passing* by Nella Larsen
- *The Yellow Birds* by Kevin Powers
- *Tenth of December* by George Saunders
- *The Optimist's Daughter* by Eudora Welty
- *Breadgivers* by Anzia Yezierska
- *The Immortal Life of Henrietta Lacks* by Rebecca Skloot
- *The Best American Essays 2014* edited by John Jeremiah Sullivan
- *The Best American Magazine Writing 2014* edited by The American Society of Magazine Editors

Movies

- *Rabbit-proof Fence*
- *Smoke Signals*
- *Page One: Inside the New York Times*
- *The Front Page* (any version)

FOREIGN LANGUAGES

FRENCH

Activities

- Visit a website for language learning:
www.languagenut.com/us/ (section for home learners)
french.yabla.com (immersion)
french.about.com (lessons, quizzes, & listening exercises for all levels)
- Write a penpal in France - www.studentsoftheworld.info/menu_penpals
- Join *French Chat* online - french-chat.com
- Read a French newspaper - www.w3newspapers.com/france
- Add some French music to your playlist
- Set your electronics' language to French
- Read instructions in French
- Keep a journal in French
- Get a subscription to TV5 at home

Movies / Videos

- *La Belle et la Bête* (Jean Cocteau 1946)
- *Hiroshima mon amour* (Alain Resnais 1959)
- *Jean de Florette* (1986)
- *Manon des sources* (1987)
- *Cousin Cousine* (Jean-Charles Tacchella 1975)
- French animation on YouTube: Asterix & Obelisk, Babar, Madeleine, Tintin
- French YouTube Channels - www.youtube.com/channels?q=french

LATIN

Books / Reading

- *Lavinia* by Ursula K. LeGuin (recommended for AP Latin students) - a novel inspired by Vergil's Aeneid; written from the perspective of Lavinia, the woman whom Aeneas marries when he arrives at last in Italy
- *Imperium* and *Conspirata* by Robert Harris - two books of a trilogy based on the life and times of the great Roman orator Cicero
- *Pompeii* by Robert Harris

Activities

- Listen to *The History of Rome* podcast by Mike Duncan – traces roughly 1,000 years of history from Rome's foundation to its fall, in a vivid and easy-to-listen-to storytelling style. Find it on iTunes or at www.thehistoryofrome.typepad.com
- Explore museums with collections of Ancient Greek and Roman art and artifacts:
 - **Legion of Honor** in San Francisco - legionofhonor.famsf.org
 - **Getty Villa** in Malibu, CA (free admission, with a fantastic permanent collection of ancient art, and the building itself is a recreation of an ancient Roman villa!) - www.getty.edu/visit

FOREIGN LANGUAGES

- Explore Ancient Rome through the Khan Academy - <http://www.khanacademy.org/video?v=VAgA6G75Xsl>

SPANISH

Books / Reading

- *10 años con Mafalda* by Quino
- *El tunel* by Ernesto Sabato
- *20 poemas de amor y una canción* by Pablo Neruda
- *La borra del café* by Mario Benedetti
- Online collections of children's stories (great for building up your vocabulary!):
www.rincondelpoeta.com.ar/indexcuentos
www.elhuevodechocolate.com/cuentos
www.cuentosparachicos.com/BIL/cuentosclasicos/index

Activities

- Listen to *Alt.Latino*, NPR Music's Program for Latin Alternative and Rock - www.npr.org/sections/latino
- Listen to *Nulu*, the news in Spanish - www.nulu.com/en-us/stories/en-us/es-mx/hard
- Register for *Duolingo*, a website that offers free language instruction where users translate documents and vote on the accuracy of the translations - www.duolingo.com

Movies

- *Voces Inocentes*
An incredibly moving story of a little boy who lives in civil war torn El Salvador during the 1980's. The movie is based on a true story and it does an amazing job of teaching this important historical event. *Voces Inocentes* depicts how the war affected the schools, the church and its leaders, individual families, and the child soldiers who were made to serve in the government's army even at the young age of 12. Students will never forget this movie, and although it is very poignant, it is also inspiring and uplifting.
Rated R for war-related violence
- *Cautiva*
The heartbreaking story of the desaparecidos of Argentina's dirty war through the eyes of a teenage girl who suddenly finds out that she is the child of a kidnapped young couple who were activists during this tumultuous time in Argentina's history. This movie effectively shows the reactions and opinions of the people who supported the regime and the fear of those who dared to oppose the government.
Not Rated but there is a shower scene with brief nudity, a baby being born scene and a nursing baby
- *Viva Cuba*
A fun, lively movie about two little Cuban kids who are best friends and they decide to run away when Malú's mom tells her that she is taking her away from Cuba to live in another country. In addition to the beautiful images of Cuba and the Cuban dialect that exist throughout the film, cultural elements such as opinions about the government and typical school uniforms and conduct are seen. This movie is an excellent way to introduce topics such as Operación Pedro Pan, the Cuban Missile Crisis and the cultural impact of Cubans on the United States.
Not Rated
- *Real Women Have Curves*
East Los Angeles is the backdrop for this comedic drama about a teenage girl trying to figure out

FOREIGN LANGUAGES

whether she should follow her dream of getting a college education or doing what her Hispanic family expects by getting a job to help support the family. The dialogue is $\frac{3}{4}$ English and $\frac{1}{4}$ Spanish with superb examples of Hispanic culture in the United States.

Rated PG13

- *Casi Casi*

The story of a group of fun-loving teenagers in Puerto Rico who devise a plan to help Emilio win the heart of his high school crush by getting her elected as the class president.

Rated PG

HEALTH, WELLNESS, & HUMAN DEV.

ALL GRADES

Activities

- Anything offered by iBme - ibme.info
- Get outside!!! Hike, bike, sail, surf, picnic on the beach and whatever you can do OUTSIDE AS A FAMILY – enjoy dinners outside together and much more. We live in a paradise!

Books / Reading

- *Brainstorm* by Dan Siegel
(or view a lecture by the author at ibme.info/mindfulness/mindfulness-teen-brain)
- *Brain Rules* by John Medina
- *Mindset* by Carol Dweck
- *Younger Next Year* by Henry Lodge
- *Why Zebras Don't Get Ulcers* by Robert Sapolsky
- Magazine Article: "The Amazing Teen Brain," Scientific American, June 2015

Books for Parents (Communication & Parenting)

- *How to Talk So Kids Will Listen & Listen So Kids Will Talk* by Adele Faber and Elaine Mazlish
- *Non-Violent Communication* by Marshall Rosenberg
- *Time-out for Parents* by Cheri Huber

Videos

- The 22 Best TED Talks for Fitness, Health, and Happiness Inspiration - greatist.com/health/TED-talks-inspiration

HISTORY

ALL GRADES

Activities / Experiences

- Traveling this summer? Contact a faculty member (or the department head) for recommendations!
- Museum of Natural History Ohlone exhibits (free on the First Friday of every month) - santacruzmuseum.org
- Visit Mission Santa Cruz to see how new Indian converts lived
- Read a newspaper daily, with special attention to politics, investigative journalism, and the business section
- Explore good magazine journalism in *The New Yorker*, *The Atlantic*, or the *New York Review of Books*
- Visit Colton Hall in Monterey, where the first California Constitution was drafted in 1849 - www.monterey.org/museums/City-Museums/Colton-Hall-Museum
- Go to the 20th Annual Indian Canyon Storytelling festival on July 9th in Hollister - www.indiancanyonlife.org/storytelling

Movies

- *The Civil War*
- *Lincoln*
- *Fog War*
- *Thirteen Days*
- *Glory*
- *John Adams*
- If you have Amazon Prime, explore the numerous free streamable documentaries in the “American Experience” series.

MIDDLE SCHOOL

Books / Reading (World History)

- *The Forgotten: Aten’s Last Queen* by J. Lynn Else
- *Heroes, Gods, and Monsters of the Greek Myths* by Bernard Evslin
- *Sophie’s World: A Novel about the History of Philosophy* by Jostein Gaarder
- *Mythology* by Edith Hamilton
- *The Dovekeepers* by Alice Hoffman
- *Akhenaten: Dweller in Truth* by Naguib Mahfouz
- *Nectar in a Sieve* by Kamala Markandaya
- *The Ramayana: A Shortened Modern Prose Version of the Indian Epic* by R. K. Narayan
- *The Bull from the Sea* by Mary Renault
- *Cro-Magnon 25,000 BP* by Jack Rourk
- *Daughter of the Goddess Lands* by Sandra Saidak
- *The Kosambi Intrigue: A Tale in the Time of Buddha* by Susan Carol Stone
- *Black Ships Before Troy: The Story of the Iliad* by Rosemary Sutcliff

HISTORY

Books / Reading (U.S. History)

- *Pocahontas* by Joseph Bruchac
- *My Brother Sam Is Dead* by James Lincoln Collier and Christopher Collier
- *Elizabeth Cady Stanton and Susan B. Anthony: A Friendship That Changed the World* by Penny Colman
- *The Red Badge of Courage* by Stephen Crane
- *The Cartoon History of the United States* by Larry Gonick
- *Uprising* by Margaret Petersen Haddix
- *The United States Constitution* (graphic novel) by Jonathan Hennessey and Aaron McConnell
- *The Civil War for Kids: A History with 21 Activities* by Janis Herbert
- *We Were There, Too! Young People in U.S. History* by Philip M. Hoose
- *Georgiana Bruce Kirby: Feminist Reformer of the West* by Georgiana Bruce Kirby
- *World War II for Kids: A History with 21 Activities* by Richard Panchyk
- *A Kid's Guide to African American History* by Nancy I. Sanders
- *Chasing Lincoln's Killer* by James L. Swanson
- *Roll of Thunder, Hear My Cry* by Mildred D. Taylor
- There is also a series of DK Biographies of notable people, including Abigail Adams, Abraham Lincoln, Thomas Jefferson, Amelia Earhart, George Washington, Thomas Edison, Ronald Reagan, Barack Obama, Martin Luther King, Annie Oakley, John F. Kennedy, and Helen Keller.

HIGH SCHOOL

Books / Reading (World History)

- *Things Fall Apart* by Chinua Achebe
- *The Year 1000* by Lacey Danziger
- *Guns, Germs, and Steel* by Jared Diamond
- *Mythology* by Edith Hamilton
- *King Leopold's Ghost: A Story of Greed, Terror, and Heroism in Colonial Africa* by Adam Hochschild
- *Conquistador: Hernan Cortes, King Montezuma, and the Last Stand of the Aztecs* by Buddy Levy
- *The Last Days of the Incas* by Kim McQuarrie
- *The Ramayana* by Ramesh Menon
- *The Time Traveler's Guide to Medieval England: A Handbook for Visitors to the Fourteenth Century* by Ian Mortimer
- *Justinian's Flea: The First Great Plague and the End of the Roman Empire* by Willam Rosen
- *Boxers and Saints* (companion graphic novels) by Gene Luen Yang

Books / Reading (U.S. History & Government)

- United States Constitution
- *Twenty Years at Hull House* by Jane Addams
- *Citizenship: A Very Brief Introduction* by Richard Bellamy

HISTORY

- *Bound for Canaan: The Epic Story of the Underground Railroad, America's First Civil Rights Movement* by Fergus M. Bordewich
- *The Price of a Child* by Lorene Cary
- *1858: Abraham Lincoln, Jefferson Davis, Robert E. Lee, Ulysses S. Grant and the War They Failed to See* by Bruce Chadwick
- *The Autobiography of Frederick Douglass* by Frederick Douglass
- *Founding Brothers* by Joseph J. Ellis
- *His Excellency: George Washington* by Joseph J. Ellis
- *Elizabeth Cady Stanton: An American Life* by Lori D. Ginzburg
- *Team of Rivals: The Political Genius of Abraham Lincoln* by Doris Kearns Goodwin
- *The Children Bob Moses Led* by William Heath
- *Incidents in the Life of a Slave Girl* by Harriet Jacobs
- *Georgiana Bruce Kirby: Feminist Reformer of the West* by Georgiana Bruce Kirby
- *Lies My Teacher Told Me: Everything Your American History Textbook Got Wrong* by James W. Loewen
- *The Ohlone Way* by Malcolm Margolin
- *1776* by David McCulloch
- *American Lion: Andrew Jackson in the White* by Jon Meacham
- *Thomas Jefferson: The Art of Power* by Jon Meacham
- *Bullwhip Days: The Slaves Remember: An Oral History* by James Mellon, ed.
- *Coming of Age in Mississippi* by Anne Moody
- *Theodore Rex* by Edmund Morris
- *The Killer Angels* by Michael Shaara
- *Summer of 1787: The Men Who Invented the Constitution* by David O. Stewart
- *What the Anti-Federalists Were For: The Political Thought of the Opponents of the Constitution* by Herbert J. Storing and Murray Dry
- Any *Doonesbury* compilation with strips from the 1970s or 1980s
- *A Midwife's Tale* by Laurel Thatcher Ulrich
- *The Wordy Shipmates* by Sarah Vowell
- *A People's History of the United States* by Howard Zinn

MATH

ALL GRADES

Activities / Experiences

- The MakersFactory in downtown SC has tech-related camps and clubs - makersfactory.com
- Visit the Exploratorium in San Francisco and bring questions to your teacher in the fall - www.exploratorium.edu
- Going to NY City? Check out the Math Museum - momath.org
- Do some of Martin Gardner's Math Puzzles - www.amazon.com/Martin-Gardner/e/B000AP8X8G
- Try puzzles like nonograms, ken ken, and Sudoku
- Download printable puzzles and mazes from KrazyDad - krazydad.com
- Practice origami
- Learn to code! - code.org
- Use an online floor planner - www.floorplanner.com
- Make 3-D drawings with Sketchup - www.sketchup.com/products/sketchup-make
- Explore the Khan Academy (ask your teacher for suggested exercises) - www.khanacademy.org/math

Board Games

- Set: The Family Game of Visual Perception - amzn.com/B00000IV34
- Guillotine Card Game - amzn.com/B000ARTT7S
- Qwirkle Board Game - amzn.com/1933054395

Online / Electronic Games

- Classic math puzzles - nlvm.usu.edu/en/nav/category_g_3_t_2.html
- Rummikub online - www.rummikub.com
- Desmos (Graph functions, plot tables of data, evaluate equations, explore transformations, and more available for iPad or browser) - www.desmos.com
- Sushi Monster (Mental math abilities game available for iPad) - itunes.apple.com/us/app/sushi-monster/id512651258?mt=8
- DragonBox (Algebra game available for iOS, Android, & PC/Mac) - dragonboxapp.com
- CargoBot (A puzzle game where you teach a robot how to move crates, available for iPad) - twolivesleft.com/CargoBot
- Lemmings (in-browser game) - www.elizium.nu/scripts/lemmings
- The Eyeballing Game (in-browser geometry game) - woodgears.ca/eyeball
- No-Left-Turn Mazes - clickmazes.com/noleft/ixnoleft.htm
- Orientation Mazes - clickmazes.com/orient/ixorient.htm
- Clickmazes - clickmazes.com
- Manufactoria (flash, in browser) - pleasingfungus.com/Manufactoria
- LightBot - lightbot.com

Movies / Videos

- A collection of math-related clips from movies - www.math.harvard.edu/~knill/mathmovies

MATH

- “Numberphile” - www.youtube.com/user/numberphile
- “Learn Math Tutorials” - www.youtube.com/learnmathtutorials
- “Between the Folds,” a PBS documentary - youtu.be/4zdvmA4SkRo
- “Flatland”: *Have you ever imagined if all of us live in a 1-dimension world? And after a long life in this one, the surprise to see the 3-dimension world in the first time?* - youtu.be/Mfglluny8Z0
- “Sphereland” (same as “Flatland” but living in a sphere) - youtu.be/6BHQPx7 Fs
- Arthur Benjamin’s Mathemagics TED Talk - www.ted.com/talks/arthur_benjamin_does_mathemagic
- Watch any TED talk. Just search for “math” and have fun! - www.ted.com/search?q=math

MIDDLE SCHOOL

Books / Reading

- *Chasing Vermier* by Blue Balliet [grade 6]
- *Math Trek: Adventures in the Math Zone* by Ivars Peterson & Nancy Henderson [grades 6-8]
- *Math Trek 2: A Mathematical Space Odyssey* by Ivars Peterson & Nancy Henderson [grades 6-8]
- *The Man Who Counted* by Malba Tahan [grades 6-8]
- *The Number Devil* by Hans Magnus Enzensberger [grades 6-8]
- *Flatland* by Edwin Abbot [grades 7+]
- *The Housekeeper and the Professor* by Yoko Ogawa [grades 8+]
- Any novels by John Green [grades 8+]
- Anything from *The Art of Problem Solving* - www.artofproblemsolving.com [all grades]

Movies / Videos

- Disney’s *Donald in Mathmagic Land*

HIGH SCHOOL

Books / Reading

- *The Housekeeper and the Professor* by Yoko Ogawa [grades 8+]
- Any novels by John Green [grades 8+]
- *Men of Mathematics* by E.T. Bell [grades 9-12]
- *Zero: The Biography of a Dangerous Idea* by Charles Seife [grades 9-12]
- *Crimes and Math Demeanors* by Leith Hathout [grades 9-12]
- *Fooling Houdini: Magicians, Mentalists, Math Geeks, and the Hidden Powers of the Mind* by Alex Stone [grades 9-12]
- *The Man Who Loved Only Numbers* by Paul Hoffman [grades 9-12]
- *e: The Story of a Number* by Eli Maor [grades 10-12]
- Anything from *The Art of Problem Solving* - www.artofproblemsolving.com [all grades]

Movies / Videos

- “Math Team: The Movie” - youtu.be/-xhWk3F7bQ4

SCIENCE

PHYSICS / PHYSICAL SCIENCE

Books / Reading

- *Surely You're Joking Mr. Feynman* by Richard Feynman
- *What Do You Care What Other People Think?* by Richard Feynman
- *A Brief History of Time* by Stephen Hawking
- *The Universe in a Nutshell* by Stephen Hawking
- *Bad Science* by Ben Goldacre
- *Death by Black Hole* by Neil deGrasse Tyson
- *Letters to a Young Scientist* by Edward O. Wilson
- *For the Love of Physics: From the End of the Rainbow to the Edge of Time* by Walter Lewin
- *The Immortal Life of Henrietta Lacks* by Rebecca Skloot
- *Radioactive: Marie & Pierre Curie, A Tale of Love and Fallout* by Lauren Redniss
- *The Physics Book: From the Big Bang to Quantum Resurrection, 250 Milestones in the History of Physics* by Clifford Pickover
- *A Short History of Nearly Everything* by Bill Bryson
- *Future Science* by Max Brockman
- *This Explains Everything: Deep, Beautiful, and Elegant Theories of How the World Works* by John Brockman
- *Big Questions from Little People and Simple Answers from Great Minds* by Gemma Elwin Harris
- *Cosmic Apprentice: Dispatches from the Edge of Science* by Dorion Sagan
- *Wonders of the Solar System* by Brian Cox
- *The Space Book: From the Beginning to the End of Time, 250 Milestones in the History of Space & Astronomy* by Jim Bell
- *An Appetite for Wonder: The Making of a Scientist* by Richard Dawkins
- *The Age of Edison: Electric Light and the Invention of Modern America* by Ernest Freeberg
- *The Pleasure of Finding Things Out: The Best Short Works of Richard P. Feynman* by Richard Feynman
- *Cosmos* by Carl Sagan

Games

- Osmos - www.osmos-game.com
- Super Planet Crash - www.stefanom.org/spc
- Bridge Constructor - www.bridgeconstructor.com

Movies / Series

- *Trinity and Beyond: The Atomic Bomb Movie*
- *Pandora's Promise*
- Neil DeGrasse Tyson's *Cosmos* series
- Carl Sagan's *Cosmos* series
- *Gravity*

SCIENCE

BIOLOGY / APES

Books / Reading

- *The Double Helix* by James Watson
- *DNA: The Secret of Life* by James Watson
- *Silent Spring* by Rachel Carson
- *Survival of the Sickest* by Sharon Moalem
- *Cadillac Desert* by Marc Reisner
- *Anything* by Michael Pollan

Activities / Experiences

- Ranger-led hikes at Henry Cowell - www.parks.ca.gov
- Academy of Sciences, SF - www.calacademy.org
- Monterey Bay Aquarium - www.montereybayaquarium.org
- Local tide pools & seal beaches
- Seymour Marine Discovery Center - seymourcenter.ucsc.edu
- Point Lobos hiking - www.parks.ca.gov
- Scuba certification (Adventure Sports Unlimited) - asudoit.com/padi-scuba-diving-classes
- Friends of the River rafting trip - www.friendsoftheriver.org
- Whale watching - santacruzwhalewatching.com
- Kayaking at Elkhorn Slough - www.kayakconnection.com/elkhorn-slough
- Bug (butterfly, ant, etc.) farms
- Check out the Watershed Council - coastal-watershed.org
- Elephant seal viewing at Año Nuevo State Park - www.parks.ca.gov

Movies / Series

- *NOVA: Incredible Journey of the Butterflies*
- *Blue Planet* series
- *Planet Earth* series
- *Life* series
- *Osmosis Jones*

CHEMISTRY

Activities / Experiences

- Make your own perfume - chemistry.about.com/od/chemistryhowtguide/a/makeperfume.htm
- Connect film science to real world chemistry
- Build a density column - chemistry.about.com/od/chemistryactivities/a/densitycolumn.htm
- Explore chemistry activities on DIY.org - diy.org/skills/chemist
- Learn about the chemicals used in everyday products - www.safecosmetics.org
- Try some of the science experiments provided below

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SCIENCE EXPERIMENTS

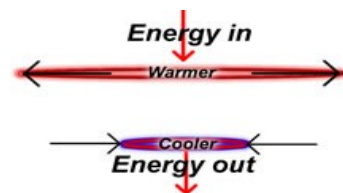
1. Hot and Cold Rubber Band

Materials needed:

- Rubber bands (medium to large size)

Experiment:

1. Place the index finger of each hand inside the loop of a medium to large size rubber band.
2. Pull your hands apart slightly, just enough to keep the rubber band from slipping off your hand.
3. Hold the rubber band up against your lips.
4. Suddenly, pull your hands apart, stretching the rubber band.
5. The rubber band will get warm!
6. Hold the rubber band stretched against your lips for 10 seconds, allowing it to cool off.
7. Now, still holding the stretched rubber band against your lips, suddenly push your hands toward each other.
8. The rubber band will become cold!



Something else to try:

- Vary the activity by stretching and releasing the rubber band at different speeds and also by using different sized rubber bands.

** Note: Human lips are very sensitive to small changes in temperature and can easily detect the rubber band getting hot or cold

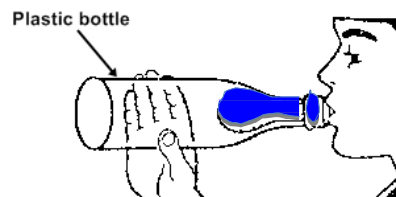
2. Blow a Balloon in a Bottle

Materials needed:

- One 2-Liter plastic bottle (or a 1-gallon plastic milk jug)
- One large round balloon

Experiment:

1. Push a large round balloon into the neck of the plastic bottle.
2. Stretch the neck of the balloon over the mouth of the plastic bottle.
3. Try to inflate (blow up) the balloon over the mouth of the plastic bottle.
4. You will only be able to blow it up slightly (if at all).
5. What do you think is happening?



Other things to try:

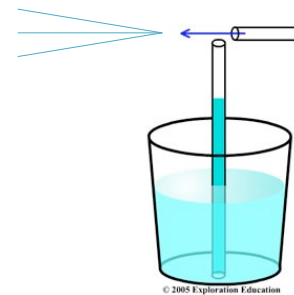
- Cut a large hole in the side or bottom of the plastic bottle with scissors. Try inflating the balloon again... this time you should not have a problem getting it to inflate.
- If you have a second plastic bottle, make a very small hole by puncturing the bottle with the tip of a ballpoint pen. Try inflating the balloon. Is it more difficult to inflate the balloon in this bottle than in the first one?
- Try to figure out how big the hole needs to be to easily get the balloon to inflate.

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3. Straw Sprayer

Materials needed:

- Soda straw
- Drinking glass
- Water
- Mint or vanilla extract
- Food coloring (blue and yellow)



Experiment:

1. Cut a soda straw in half
2. Stick one of the straw halves (#1) vertically into a glass full of water.
3. Place the other straw piece (#2) against the first straw piece at a right angle.
4. Blow through it. The harder you blow through straw #2, the higher the water will rise in straw #1.
5. When water reaches the top of straw #1, a fine mist of water will spray all over the place.

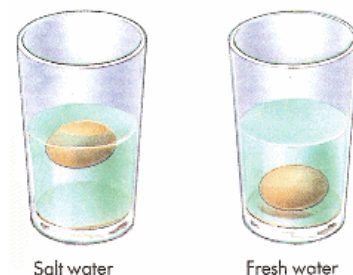
Other things to try:

- Cut different lengths of straws, which length gives the best spraying?
- Make a perfume sprayer by adding a few drops of mint or vanilla extract to the water.
- For a magic color-changing water sprayer, add some blue food coloring to the water. Spray the blue water onto some yellow food coloring placed in a dish. What color do you see?

4. Floating and Sinking Eggs

Materials needed:

- 2 raw eggs
- 2 clear drinking glasses
- Water
- Salt (kosher salt works best)
- Food coloring (blue and green)
- Spoon



Experiment:

1. Fill two clear drinking glasses about two-thirds full with water.
2. Stir salt into one of the glasses until no more salt dissolves.
3. Add an egg to each glass.
4. The egg placed in the salt water should float.

Other things to try:

- Add blue food coloring to the glass of salt water and green food coloring to the glass of unsalted water. Place the egg in each glass and show the glasses to your family and friends. Fool them by telling them that eggs float in blue water but not in green water.
- Take your egg out of the salt water. Pour out enough water so the glass is half full of salty water. Slowly and carefully add fresh water to the glass by spooning in the water onto the surface. When

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your glass is about two-thirds full return the egg to the glass. The egg should float suspended in the water.

5. Fruit juices and sodas

Materials needed:

- Paper and Styrofoam cups
- Baking soda
- Lemon juice, orange juice, apple juice, grapefruit juice, grape juice, pineapple juice, tomato juice
- Carbonated beverages: cola and non-cola



Experiment:

1. Test the acid strength of some juices and sodas.
2. Put baking soda into various cups.
3. Pour each of the juices or sodas onto the baking soda in a cup.
4. Check to see which one bubbles the most.

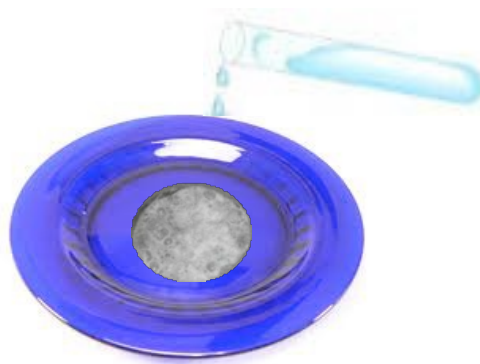
Other things to try:

- Try aging the fruit juices and sodas by letting them stand around for several hours to several days, and then combine them with baking soda. Which liquids lose their acidity the most quickly?
- Microwave soda in a paper or Styrofoam cup briefly (no more than 30 seconds). Then test it. Does a warmed-up cup of soda have as much acidity as a non-warmed cup of soda?

6. Prepackaged Acid-Base Mixtures

Materials needed:

- Baking powder (fresh baking powder works best)
- Baking soda
- Antacid tablets
- 2 dinner plates
- Water
- Spoon
- Cups
- Cream of tartar



Experiment:

1. Add a spoonful of baking powder to a dinner plate.
2. Place a spoonful of baking soda next to it.
3. Pour a little bit of water onto both solids.
4. The baking powder will fizz, but the baking soda will not.
5. Place an antacid tablet on another dinner plate.
6. Add water to the tablet. It will fizz, just like the baking powder did.

Other things to try:

- Try different brands of baking powder and test to see which one works best.

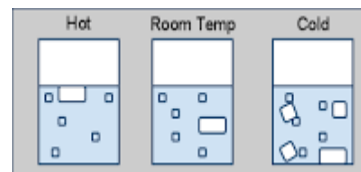
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- You can create your own acid-base mixture by mixing sour salt (citric acid) with baking soda. When you add water to a mixture of sour salt and baking soda, it should fizz even more than baking powder!
- Another solid acid you can pre-mix with baking soda is cream of tartar, derived from grapes.

7. How to Speed Up a Chemical Reaction

Materials needed:

- 3 antacid tablets
- Baking powder
- Homemade acid-base fizzy mixture: baking soda + sour salt
- Water
- 3 drinking glasses
- Stopwatch (optional)



Experiment:

1. Prepare three glasses of water at different temperatures.
2. Add cold water and an ice cube to glass #1.
3. Add lukewarm water to glass #2.
4. Add hot water to glass #3.
5. Quickly add an antacid tablet to each of the glasses.
6. What do you see happening in each glass of water?

Something else to try:

- Do the temperature experiment (using hot, warm, and cool water) with baking powder. Do it again with the homemade acid-base fizzy mixture (baking soda + sour salt). Which reacts faster: baking powder or your acid-base fizzy mixture?

7. Purple Cabbage Juice Indicator

Materials needed:

- Purple cabbage
- Warm water
- Rubbing alcohol ****DO NOT HEAT – FLAMMABLE****
- Resealable zipper closure plastic bag
- Acids (white vinegar, lemon juice, and other fruit juices)
- Bases (baking soda, detergent, and milk of magnesia)
- Cheese grater
- Cups
- Microwave oven



Experiment:

1. Shred pieces of purple cabbage with the cheese grater.
2. Put the pieces in the resealable plastic bag.
3. Add water to half-fill the bag.

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4. Heat the bag containing the cabbage and water in a microwave oven for 20 to 30 seconds until the water becomes warm to hot, and the water turns dark purple. **NOTE: DO NOT DO THIS WITH THE RUBBING ALCOHOL!**
5. Shake the bag.
6. Pour the purple cabbage juice into a cup, leaving the cabbage pieces in the bag.
7. The purple liquid is an acid-base indicator, since it will change to different colors when it is added to an acid or a base.
8. Mix it with acids, such as the white vinegar, lemon juice, and other fruit juices – the purple color should change to pink!
9. Mix the purple liquid with bases, such as baking soda, detergent, and milk of magnesia – the purple color should change to green!

Something else to try:

- Instead of extracting the purple color with warm water, shake the cabbage pieces with rubbing alcohol at room temperature ONLY. ****Caution: DO NOT HEAT!**** Which is a better indicator (gives a more dramatic color change): purple juice in warm water or in rubbing alcohol?

Image references:

1. Hot cold rubber band:
<http://www.explorationeducation.com/activities/thermodynamics.html>
2. Blowing a balloon inside a plastic bottle:
<http://www.oldschool.com>
3. Straw sprayer:
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4. Floating and sinking eggs:
<http://www.instructables.com/id/Science-Experiments-With-Eggs/step5/Floating-eggs/>
5. Fruit juices and sodas:
<http://ahayahyashiyadietrlawsrecipes.wordpress.com/2014/03/16/how-to-whiten-teeth-with-baking-soda/>
6. Prepackaged acid-base mixtures:
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http://lickystickyscience.blogspot.com/2010_08_01_archive.html
http://www.123rf.com/clipart-vector/pour_water.html
7. How to speed up a chemical reaction:
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8. Purple cabbage indicator:
<http://whatscookingwithkids.com/2011/09/26/kitchen-science-cabbage-juice-chemistry/>

Experiments taken from Cool Chemistry by Steven W. Moje