

Science Information for Teachers 6~23~2012

Why huge dinosaurs had such tiny babies

A new study may explain many mysteries about dinosaurs, such as why enormous species had such small offspring, why non-flying dinos went extinct, and why today's birds fly.

http://www.msnbc.msn.com/id/47080745/ns/technology_and_science-science/#.T46z2NnviSp

DNA for Teachers

Here you can find a range of resources from Flash animations to paper and web based activities, which will support the teaching of topics such as DNA, genes and proteins, cancer and the Human Genome Project. The activities and animations are designed to complement the national curriculum and GCSE, AS and A-level Science specifications for 14-19 year olds and can be used during lessons and science clubs or used for setting homework tasks.

http://www.yourgenome.org/landing_teachers.shtml

Craft a DNA Bracelet

Every living organism has DNA. Create your own DNA bracelet using colorful beads that correspond to a segment of DNA sequence from a domestic cat, platypus or a woolly mammoth, among other animals.

DNA Bracelet Instructions

<http://www.genome.gov/Pages/Education/Modules/DNABraceletInstructions.pdf>

DNA Bracelet Organism Sequence Templates

<http://www.genome.gov/Pages/Education/Modules/DNABraceletOrganismSequenceTemplates.pdf>

PCR on the cheap!

Check it out! It's a do-it-yourself PCR machine for around \$600.00 That's a steal compared to what they can cost. Plus, you get the added cool-ness of building it yourself. Would make a great project, I think.

<http://www.openpcr.org>

All the waters of the earth

What if we took all the water on the Earth and made it into a round ball. How big would it be? This illustration shows you.

<http://apod.nasa.gov/apod/ap120515.html>

The Swan Glowing in Flight

Best known as a swan winging its way across the night, the constellation Cygnus is easily seen in the northern hemisphere's summertime sky. This new view of the Cygnus-X star-forming region by the Herschel Telescope highlights chaotic networks of dust and gas that point to sites of massive star formation.

http://www.nasa.gov/multimedia/imagegallery/image_feature_2248.html

Earth Science

Movies, worksheets, labs and other useful information that will make your Earth Science experience more enjoyable.

<http://www.81science.com/81Science.com/Topics.html>

Resource Links

A large number of resource links

<http://www.colonial-academy.org/index.html>

Talking Glossary of Genetic Terms

The National Human Genome Research Institute (NHGRI) created the Talking Glossary of Genetic Terms to help everyone understand the terms and concepts used in genetic research. In addition to definitions, specialists in the field of genetics share their descriptions of terms, and many terms include images, animation and links to related terms.

<http://www.genome.gov/Glossary/index.cfm>

10 incredible LEGO machines that really work

For those budding engineers you may have in class.

<http://www.gadgetbox.msnbc.msn.com/technology/gadgetbox/10-incredible-lego-machines-really-work-724499>

Royal Society Picture Library

The Royal Society Picture Library is an online database of digital images of paintings, drawings and prints held in our collections. It has been created to inspire the exploration of science through its visual history.

Browse and search rare, intriguing, beautiful and often surprising pictures selected from the collections of the Royal Society, the world's oldest scientific academy.

<https://pictures.royalsociety.org/home>

Flash animations for classroom use

Cellular Respiration

DNA and Genetic Disorders

DNA to RNA to Protein - What does it all mean?

Electrophoresis - Separating by Length

Electrophoresis - What's in a Band?

Photosynthesis

Polymerase Chain Reaction (PCR) - Virtual Lab

Protein Electrophoresis

AIDS, HIV and tRNA

Bacterial Homeostasis and Tooth Decay

<http://lifesciences.envmed.rochester.edu/media.html>

"Evolution in your own backyard"

An interview with Dr. Jeffrey Feder, Department of Biological Sciences University of Notre Dame

Studying Apple Maggot Flies as a model of the evolution of speciation

<http://www.cpet.ufl.edu/EIS/evol/index.htm>

Mr. Science Guy

Teacher resources for Earth Sciences.

<http://www.mrsciguy.com/resources.html>

Sing About Science

The SingAboutScience.org database, it now covers >5,500 songs varying widely in topic and grade level. Website visitors may search the database using such criteria as keywords from lyrics, performer/songwriter names, and age ranges targeted by songs.

<http://singaboutscience.org/>

Before & After Images of Environmental Change

Each week our State of Flux gallery features images of different locations on planet Earth, showing change over time periods ranging from centuries to days. Some of these effects are related to climate change, some are not. Some document the effects of urbanization, or the ravage of natural hazards such as fires and floods. All show our planet in a state of flux.

<http://climate.nasa.gov/sof/>

Symphony of Science

I can never get enough of Symphony of Science. And they have added some new videos since I last visited.

The Quantum World & The World of the Dinosaurs. See them all at:

<http://www.symphonyofscience.com>

Strange organism in the tree of life

A single-celled organism in Norway has been called "mankind's furthest relative." It is so far removed from the organisms we know that researchers claim it belongs to a new base group, called a kingdom, on the tree of life.

http://www.msnbc.msn.com/id/47225834/ns/technology_and_science-science/#.T56q3NIRGSo

Middle School Weather

On the Web: Weather (Middle School). With so much on the web, it's hard to know what's really useful. In this section, you'll find SciLinks (websites that have been reviewed by NSTA and your peers), links to web seminars, and various other opportunities related to this theme.

http://science.nsta.org/enewsletter/2012-05/web_middle.htm?utm_source=newsletter&utm_medium=email&utm_campaign=MidSciClassMay2012

Elementary School Weather

From NSTA, On the Web: Weather (Elementary School). With so much on the web, it's hard to know what's really useful. In this section, you'll find web-related opportunities related to this theme.

http://science.nsta.org/enewsletter/2012-05/web_elementary.htm?utm_source=newsletter&utm_medium=email&utm_campaign=ElemSciClassMay2012

75 Cool Pictures

No science, but a fascinating look into the past.

<http://www.buzzfeed.com/mjs538/75-captivating-looking-into-the-past-pictures>

New HHMI AP Biology Teacher Guide

This detailed guide, written by Ann Brokaw of Rocky River High School, OH, correlates all the resources on the HHMI Holiday Lectures DVDs and BioInteractive website to specific Big Ideas, Enduring Understandings, and Essential Knowledge threads of the new AP Biology Curriculum Framework. Each resource name listed in the guide is hyperlinked, so that you can just click and watch!

http://www.hhmi.org/biointeractive/guides/ap_bio/HHMI_AP_%20Biology_%20Guide.pdf

Which birds sing first in the dawn chorus?

Why do bird species sing in a particular order as the sun rises? The Wildlife Trusts and the Royal Horticultural Society, which run the Big Wildlife Garden competition, explain what you might hear and when.

http://www.guardian.co.uk/environment/interactive/2012/may/09/birds-sing-first-dawn-chorus?CMP=tw_t_gu

Science Videos

From the American Museum of Natural History. Nice, short videos under 8 minutes in length.

<http://www.amnh.org/sciencebulletins/>

The Story of "Send"

From Google, Take a journey through Google's data centers by following an email along its path.

<http://www.google.com/green/storyofsend/desktop/#>

DNA Day teacher resources

The National Human Genome Research Institute has National DNA Day teacher resources at:

<http://www.genome.gov/20519692>

You can search our Freebies for Science Teachers web page using the keyword "DNA" to find other free resources.

<http://www.nsta.org/publications/freebies.asp>

Rubber Chicken Flies into Solar Storm

In a unusual twist on space science, students in California have launched a rubber chicken to the edge of space to study a solar storm.

http://science.nasa.gov/science-news/science-at-nasa/2012/19apr_camilla/

Reach for the Stars

Reach for the Stars ~ National Rocket Competition

Launches Collegiate Challenge

As an exciting addition to our 6th year, the Reach for the Stars ~ National Rocket Competition has added a new dimension - the Collegiate Challenge. Thanks to a generous grant from the Florida Space Grant Consortium, nine Florida colleges and universities will be joining the competition and battling against each other for the first ever-college level only-win.

Funding is still available. Go to <http://www.TheRocketman.net> for detailed rules, regulations and application.

The collegiate level challenges competitors to redesign their rocket for maximum accuracy using computer simulation programs (like NASA's Rocket Modeler or Rock-Sim). Rocket length, diameter, fin shape, weight and parachute design are all variables in the challenge. The goal – land your rocket by parachute as close as possible to an on-field target.

Both the Florida state and the national winner will celebrate at the Kennedy Space Center Visitor Complex and the Astronaut Hall of Fame where they will receive trophies and launch their rockets.

A Sun Pillar

Sun pillars result from the reflection of sunlight off the bottom surfaces (or less frequently, the top surfaces) of plate-shaped ice crystals composing cirrus clouds. These crystals must be similarly oriented and slightly tipped with respect to the viewer in order for a pillar to be observed. The crimson shaft piercing the purple sky made this sunset unforgettable.

<http://epod.usra.edu/blog/2012/05/brilliant-sun-pillar-over-jenison-michigan.html>

Perpetual Ocean

When poets and storytellers speak of the ocean they are often struck by its constant, restless motion, from the rolling deep of the open sea to the crashing coastal surf. Even the most casual observer is impressed by the swirl of tides or the march of waves against the shore. But few note the silent, subtle passage of currents. Yet the power of currents to move and control the seas is unmatched.

<http://www.youtube.com/watch?v=xusdWPuWAoU>

9.999... reasons that .999... = 1

No, I'm Sorry, It Does.

Here is a video about it:

<http://www.youtube.com/watch?v=TINfzxSnnIE>

And here are some equations:

http://polymathematics.typepad.com/polymath/2006/06/no_im_sorry_it_.html

Admiral Grace Hopper Demonstrates A Nanosecond

Rear Admiral Grace Murray Hopper (December 9, 1906 – January 1, 1992) was an American computer scientist and United States Navy officer. A pioneer in the field, she was one of the first programmers of the Harvard Mark I computer, and developed the first compiler for a computer programming language.

In this video she conceptualizes a nanosecond.

<http://www.flixy.com/admiral-grace-hopper-demonstrates-a-nanosecond.htm>

Bird Webcams

There are two live webcams from Cornell, one for the red tailed hawk and one for the great blue heron.

great blue heron: <http://www.allaboutbirds.org/page.aspx?pid=2433>

red tailed hawk: <http://www.allaboutbirds.org/page.aspx?pid=2422&ac=ac>

We Are the Explorers

Why do we explore? Simply put, it is part of who we are, and it is something we have done throughout our history. In NASA's new video, "We Are the Explorers," we take a look at that tradition of reaching for things just beyond our grasp and how it is helping us lay the foundation for our greatest journeys ahead.

http://www.nasa.gov/multimedia/videogallery/index.html?media_id=134209771

Richmond Eagle Cam

<http://www2.timesdispatch.com/news/local/richmond-eagle-cam/>

Wind

An invisible, ancient source of energy surrounds us—energy that powered the first explorations of the world, and that may be a key to the future. This map shows you the delicate tracery of wind flowing over the US right now.

It is realtime by the hour and it is also cool.

<http://hint.fm/wind/>

Voyager: Humanity's Farthest Journey

A 3 minute video on the Voyager spacecrafts and their achievements

<http://www.jpl.nasa.gov/video/index.cfm?id=980>

Buffers

A flash animation of how a buffer works

<http://www.mhhe.com/physsci/chemistry/essentialchemistry/flash/buffer12.swf>

Stick Insect Hatching

An interesting video of a stick insect hatching from its egg.

<http://www.wimp.com/newborninsect/>

'Lens' zooms in on distant galaxy

A natural "zoom lens" in space offers a uniquely close-up look at the brightest gravitationally magnified galaxy yet discovered.

<http://www.futurity.org/science-technology/lens-zooms-in-on-brightest-distant-galaxy/>

Study Of Ribosome Challenges 'RNA World' Hypothesis

The "RNA world" hypothesis suggests that the first stages of molecular evolution involved RNA and not proteins, and that proteins (and DNA) emerged later. Now, researchers have found evidence that proteins were on the scene and interacting with RNA even before the ribosome's many working parts were recruited for protein synthesis.

http://www.eurekalert.org/pub_releases/2012-03/uoia-sor030512.php

Implosion of a 55 gallon steel drum

Using steam and a garden hose. Impressive.

<http://www.wimp.com/steeldrum/>

We stopped dreaming

Neil deGrasse Tyson on the decline in science and NASA

<http://www.wimp.com/stoppeddreaming/>

THE STREAM STUDY

The Stream Study provides a method to determine the water quality of a stream based on the collection and identification of stream-bottom macroinvertebrates.

<http://people.virginia.edu/~sos-iwla/Stream-Study/StreamStudyHomePage/StreamStudy.HTML>

Deep ocean mysteries and wonders

In the deepest, darkest parts of the oceans are ecosystems with more diversity than a tropical rainforest. Taking us on a voyage into the ocean -- from the deepest trenches to the remains of Titanic -- marine biologist David Gallo explores the wonder and beauty of marine life.

http://www.ted.com/talks/deep_ocean_mysteries_and_wonders.html

Most Comprehensive Collection of NASA Images

NASAIMAGES.org is the most comprehensive compilation of NASA's new and historic imagery: photographs, film and video. Imagery can be explored, downloaded and embedded with new material being added on a regular basis.

<http://www.nasaimages.org>

2012 SUMMER PROGRAMS FOR HIGH SCHOOL STUDENTS

Applications are currently being accepted.

Visit the program website to download an application!

Student Science Training Program: June 10 - July 28, 2012 www.cpet.ufl.edu/sstp

The 54th Annual UF-SSTP is a seven-week residential research program for selected rising seniors who are considering medicine, science, math, computer, or engineering careers. The program emphasis is research participation with a UF faculty research scientist and his/her research team. Students engage in the on-going research of their faculty mentor for 30 hours each week, attend lectures by researchers on current topics, and participate in a UF honors seminar class. Students enrolled in a Florida high school have the option to earn up to six dual enrollment credits.

Weekend events include social and service activities, as well as field trips to a theme park, the Ichetucknee River, and other fun Florida places of interest. Participants gain effective leadership communication and skills through small group discussions, oral presentations, workshops, and practical experiences. Students live in residence halls on campus and make life-long friends through the SSTP experience. *Program Fee: \$3500 (meals not included) and limited financial assistance is available for students attending a Florida high school.*

Science Quest: July 8 - 14 and July 15 - 21, 2012 www.cpet.ufl.edu/sciquest

Science Quest will immerse rising tenth graders in various bench and field laboratories to stimulate interest and appreciation for the range of college and career opportunities available in science. Students live in a campus residence, attend a variety of lectures and demonstrations, visit research laboratories, and engage in multiple science experiments. Science Quest participants explore topics in Engineering, Geology, and Physics; delve into the molecular sciences with an emphasis on biomedical, environmental, and forensic applications; investigate research areas in Entomology, Microbiology, and Zoology; and much more. *Program Fee: \$650 (one week, meals included).*

Future Animal Career Experience for Students: July 22 - 28, 2012

This year CPET is co-sponsoring a program with the College of Veterinary Medicine for students who have completed a session of the 2012 Science Quest. FACES is designed for students who have an interest in a career in veterinary medicine. The week-long residential program will give participants the opportunity to explore the diversity of career possibilities within veterinary medicine through special lectures, demonstrations, tours and field-trips. FACES is supported by the faculty, residents and students of the College of Veterinary Medicine many of who will play an active role in making the summer program possible. Please indicate your interest in FACES in the personal essay portion of your Science Quest application. *Program Fee: \$850 (one week, meals included).*

Center for Precollegiate Education and Training

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Gainesville, FL 32611

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www.cpet.ufl.edu

Questions or comments? Email us at: cpet@cpet.ufl.edu

Penguin Cam at San Diego Zoo

The video will be live through March and April to promote "Frozen Planet," a show spotlighting earth's polar regions, which premieres Sunday, March 18 at 8 p.m. on Discovery.

<http://www.ustream.tv/penguincam>

The story behind the science

Thirty stories spanning five disciplines help students explore the development of key science concepts through the eyes of the scientists who were involved. Supplemental resources are provided for teachers to help achieve the greatest impact from the stories.

<http://www.storybehindthescience.org/>

Beyond Penguins and Polar Bears

Beyond Penguins and Polar Bears is an online professional development magazine for elementary teachers which focuses on preparing teachers to teach polar science concepts to K-5 classrooms. Twenty monthly issues are planned, each of which will include standards-based science across five departments. Materials are chosen specifically to help teachers understand and to explain the role of the polar regions in the global ecosystem

<http://beyondpenguins.ehe.osu.edu/>

Beyond Weather and the Water Cycle

Beyond Weather and the Water Cycle is an online professional development magazine which focuses on preparing elementary teachers to teach climate science concepts while also integrating inquiry-based science and literacy instruction. The project draws on research showing that an integrated approach can improve student achievement in science, as well as in reading comprehension and oral and written discourse abilities.

<http://beyondweather.ehe.osu.edu/>

The most astounding fact in the Universe

The universe is in us according to Neil deGrasse Tyson.

<http://www.wimp.com/astoundingfact/>

La vida de las flores

A great time lapse of flowers blooming. Or, if you like, "What amazing things violins can do to flowers".

<http://player.vimeo.com/video/27920977?title=0&%3bbyline=0&%3bportrait=0href>

Volcano from space

A very cool picture of the Sarychev Peak volcano eruption pictured from the International Space Station.

http://www.nasa.gov/images/content/626963main_volcano_XL.jpg

The power of introverts

In a culture where being social and outgoing are prized above all else, it can be difficult, even shameful, to be an introvert. But, as Susan Cain argues in this passionate talk, introverts bring extraordinary talents and abilities to the world, and should be encouraged and celebrated.

http://www.ted.com/talks/susan_cain_the_power_of_introverts.html

Food Robber

<http://www.wimp.com/roommatesfood/>

Boxer dogs refuse to go to sleep.

Too cute.

<http://www.wimp.com/boxerdogs/>

Other Stuff from Naturebytes Videos

Includes Primarily Plants, Geology, Potpourri and Geologic Map Making. Don't miss the Duckies.

<http://naturebytesvideo.com/otherstuff.html>

Goldilocks Ecology

A practical method to understand a habitat, a species and a niche.

Wherever you are there are 9 factors that are acting together to make the habitat and niche you occupy at the moment. Seven factors are not alive: sun, air, earth, water, gravity, time and fire. Two are alive, these are the biological factors. One group of biological factors contains organisms that are large enough to see, the other group you need a microscope to see the organisms. All 9 factors interact in time and space. When any factor changes, the species must adapt, move or die. A species is defined as group of organisms that are similar and are capable of interbreeding and producing fertile offspring in nature. This is the idea of "Goldilocks Ecology." For a species to thrive all nine factors must be "just right".

Free book download (pdf).

<http://goldilocksecology.com/pdfs/GE1GoldilocksEcologyStoryPart1.pdf>

Ecology Videos

Videos are included in this menu that delve into the science of nature. As the Naturesway Production team works out the what, when, where, why and how of the habitat and niche much natural science is needed to understand the dynamics. When we encounter these principles we sometimes make a video to show how we arrived at our conclusions.

From Naturebytes Videos

<http://naturebytesvideo.com/h04-ecology.html>

Massive invertebrate reference page

Iowa State University has maintained the late Charlie Drewes' website which has a lot of material about using invertebrates (including blackworms) in the lab.

<http://www.eeob.iastate.edu/faculty/DrewesC/htdocs/>

Milky Way Time Lapse Video

Some great time lapse videos of the night sky and the Milky Way

<http://dakotalapse.com/2011/02/sub-zero-winter-night-timelapse/>

<http://dakotalapse.com/2011/06/plains-milky-way/>

<http://dakotalapse.com/2012/02/temporal-distortion-2/>

<http://dakotalapse.com/2011/08/tempest-milky-way-2/>

Florida Sun 'n Fun Aerospace Educators' Workshop

Sun 'n Fun Aerospace Educators' Workshop-Saturday, Mar. 31, 8 am-to 2 pm

Join us for an exciting day of hands on sessions to take back and use in your classroom! This is the most unique setting for any workshop! With hot air balloons lifting off and the roar of planes flying overhead, enjoy your day with us at the annual Sun 'n Fun Fly-In Convention and Expo! Presenters from NASA, CAP, AOPA and FAA will lead you through a variety of concurrent sessions for K-12. Registration is just \$20, thanks to the sponsorship of the Central FL Chapter of the Air Force Association. This includes a totebag, breakfast and a delicious lunch. Lots of doorprizes! 4 teachers will fly with the AeroShell Aerobatic Team during the workshop. At the conclusion, head on out to the flightline for the airshow featuring the USAF Thunderbirds! Inservice points available.

<http://www.sun-n-fun.org>

Scale of the Universe II

If you have not seen this you will love it. Use the slider for "larger" and "smaller" and click the objects for a description of each.

<http://htwins.net/scale2/>

History of Evolutionary Thought

Just as life has a history, science has a history. Understanding the history of evolutionary thinking illuminates the nature of science.

<http://evolution.berkeley.edu/evosite/history/index.shtml>

2011 International Science & Engineering Visualization Challenge

Challenge winners as they explain the processes, techniques and thoughts behind their entries.

http://www.nsf.gov/news/special_reports/scivis/winners_2011.jsp

Cabinet Of Wonders

"This is why I have the best job in the world," exclaimed Cynthia Sagers, a program manager from the National Science Foundation, when given the opportunity to see, smell, and even touch the very specimens that British naturalist and field biologist Alfred Russel Wallace collected nearly two centuries ago.

The bugs, butterflies, moths, shells, botanical samples and personal mementoes are a treasure trove of evidence not only of the man himself — an explorer, collector and scientist who was a contemporary of Charles Darwin — but also of his scientific theories on geographical biodiversity and natural selection that were foundational to many fields of modern biological science.

<http://news.science360.gov/archives/20120224>

Microscopic Monsters: Gallery of Ugly Bugs

Some mean-looking outlaws are in a showdown to snag this year's Ugly Bug title, with the blood-sucking bedbug, dung beetle and a sinister wasp that hatches deadly larvae contending for a top spot.

The Ugly Bug Contest was started in 1997 by Northern Arizona University's Marilee Sellers and initially was a local contest. In 2008, the contest moved to the Web when Arizona State University's Charles Kazilek, also known as "Dr. Biology," became involved.

The hope is that as the public votes for the ugliest bug of 10 contenders, they'll also learn more about these insects and get a glimpse of taxonomy, or the scientific classification of living things.

<http://www.livescience.com/16868-microscopic-bugs-photo-gallery.html>

Quarked! - The Quarked!

The Quarked! project was conceived by Professor Alice Bean and a diverse team of collaborators at the University of Kansas in 2003 as an entertaining method of introducing the world of subatomic physics to kids and adults. They imagined a world in which every child knew about the small and abstract parts of science as well as they knew their favorite TV characters and asked "If we could spark such an interest in basic science early on, would the level of science literacy grow as the audience aged?" And "If children were exposed to the ideas of subatomic physics early, would more of them understand and even pursue the scientific challenges of the next century?"

<http://www.quarked.org/>

Birds Like You've Never Seen Them Before

Birds have always fascinated humans. Their flight has inspired writers, artists and engineers to create poems, legends, novels, airplanes and superheroes. The new BBC documentary Earthflight captures this fascination in a way that nobody has before. It's awesome.

Common cranes flying through Venice.

http://www.youtube.com/watch?v=DHuH7KaPbLc&feature=player_embedded

Condors' birds eye view.

http://www.youtube.com/watch?v=m4mPPDoMSQI&feature=player_embedded

Scarlet macaws feeding on clay licks.

http://www.youtube.com/watch?feature=player_embedded&v=c7ox2DYLDgo

Condor flight school.

http://www.youtube.com/watch?v=89nyq0mvqpI&feature=player_embedded

Swallows in South Africa

http://www.youtube.com/watch?v=8z-wiJa2x-I&feature=player_embedded

Pelicans hunting sardines.

http://www.youtube.com/watch?v=wfLl26yzpk8&feature=player_embedded

What a Wonderful World

In recent weeks, British and American audiences have been treated to Attenborough's latest production, Frozen Planet. Since it is said to be his last major program with the BBC, and to commemorate this milestone, they have produced a moving video that features Attenborough reading lines from "What a Wonderful World" — you know, the Louis Armstrong classic — as scenes from Attenborough's documentaries fill the screen.

<http://www.youtube.com/watch?v=auSo1MyWf8g>

Science (and more) to Music

This site offers many songs related to math, social studies, and science concepts. Science concepts include water & pollution, scientific inquiry, changes in matter, and much more. Math concepts range from order of operations to quadratic and exponential functions. After choosing a topic, you can listen to the song online, download the mp3, view lyrics, and possibly view an accompanying video.

<http://www.iamlodge.com/beans/>

Learn Chemistry - Resources for Teachers

Access Learn Chemistry for hundreds of mixed media resources to support your teaching across chemical topics and contexts

<http://www.rsc.org/learn-chemistry/resource/listing?searchtext=&fcategory=all&filter=all&Audience=AUD00000001&displayname=teachers>

NASA video depicting global warming

http://www.climatecentral.org/videos/web_features/nasa-finds-2011-ninth-warmest-year-on-record

Last mission for the space shuttle Discovery

Here is a fantastic view of Discovery on the launch pad. Follow the instructions under the picture — watch Full-screen and move your mouse over the photo. Amazing!!

http://www.usatoday.com/tech/science/space/2010-11-03-space-shuttle_N.htm

Animations of unseeable biology

We have no ways to directly observe molecules and what they do -- Drew Berry wants to change that. Drew Berry creates stunning and scientifically accurate animations to illustrate how the molecules in our cell move and interact. At TEDxSydney he shows his scientifically accurate (and entertaining!) animations that help researchers see unseeable processes within our own cells.

http://www.ted.com/talks/drew_berry_animations_of_unseeable_biology.html

Friendship 7: Celebrating 50 Years of American Spaceflight

<http://www.nasa.gov/externalflash/glenn50/>

Discovery and Atlantis Permanently Powered Down

Space shuttle Discovery was powered up hundreds of times during prelaunch processing over the course of 26 years of spaceflight. But Dec. 16, 2011 was different. That morning, technicians inside NASA Kennedy Space Center's orbiter processing facility powered the ship up -- and then down -- for the final time. Less than a week later, on Dec. 22, Atlantis followed.

http://www.nasa.gov/mission_pages/shuttle/flyout/powerdown.html

Mini-videos for middle school human body topics

8 "quick and dirty" videos on various sub-topics from the Human Body unit in a 7th grade science course.

<http://sites.google.com/site/rhscience7minivideos/>

NASA's Voyager Prepped For Data Transmitting Through 2025

In order to reduce power consumption, mission managers have turned off a heater on part of NASA's Voyager 1 spacecraft.

http://www.nasa.gov/mission_pages/voyager/voyager20120117.html

Bird digestion & other stuff

Because of their high metabolic rates, birds must consume more food in proportion to their size than most animals. To meet their metabolic needs while remaining as light as possible (to be efficient flyers), the digestive system of birds has to be both as light as possible and as efficient as possible.

<http://people.eku.edu/ritchisong/birddigestion.html>

Some Comets Like It Hot

Astronomers are still scratching their heads over Comet Lovejoy, which plunged through the atmosphere of the sun in December and, against all odds, survived.

<http://www.youtube.com/watch?v=w75lBn1QIaI>

Chemistry Now

Chemistry Now is an NBC Learn Special Collection that reveals how chemistry contributes to everyday life, with lesson plans from the National Science Teachers Association.

<http://www.nbclearn.com/portal/site/learn/chemistry-now>

New Amazing Videos Show Birds Like You've Never Seen Them Before

The new BBC documentary Earthflight captures this fascination in a way that nobody has before. It's awesome.

<http://timothyhughes.visibli.com/share/LMqaxJ>

Mitochondrial Animation

A new animation about mitochondria from the folks to brought us the Inner Life of the Cell.

<http://multimedia.mcb.harvard.edu/>

Digestive System Activities, Resources and Graphic Organizers:

Large in Intestine:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=42>

Liver and Gall Bladder:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=43>

Mouth, Pharynx and Esophagus:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=39>

Small Intestine:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=41>

Stomach:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=40>

Making Your Life-Sized Body (Organs) – Activity:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=688>

The Organs and What They Do – Lecture:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=689>

Digestive System (with Named Organs) Coloring Page:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=1389>

Digestive System Coloring Page:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=1389>

Digestive Tract Labeling Page:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=2023>

Organs of the Digestive System Activity Sheet:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=2510>

Graphic Organizer - Digestive Tract:

<http://www.exploringnature.org/db/detail.php?dbID=20&detID=3107>

Biologists Replicate Key Evolutionary Step in Life on Earth

More than 500 million years ago, single-celled organisms on Earth's surface began forming multi-cellular clusters that ultimately became plants and animals.

Now scientists have replicated that key step in the laboratory using common Brewer's yeast, a single-celled organism.

http://www.nsf.gov/news/news_summ.jsp?org=NSF&cntn_id=122828&preview=false
