Science Education Web Sites

MSED 4311 – Spring 2005

The Water Cycle/5th grade

<u>http://ga.water.usgs.gov/edu/</u> - Water Science for Schools web site. Pictures and activities in regards to the water in the world. You can get all this information in two languages. Great for Bilingual Teachers!

The Solar System/5th grade

<u>http://www.windows.ucar.edu/</u> - Windows to the Universe. This website will allow students to learn about the solar system incorporate with technology. Teachers can obtain lesson plans, classroom activities and worksheets on this subject.

The Rock/5th grade

<u>http://www.factmonster.com/</u> - Fact Monster. Website focuses on my different issue from past tense to current. Students are given the opportunity to read about math, science, current events or even sports. Resources like an atlas, a dictionary, and an encyclopedia is provide for students to utilize.

Score Science

http://scorescience.humboldt.k12.ca.us/default.htm

It has different links for kids, teachers, science search, ask a scientist, and science network. In the Kids Corner you find links to different grade levels of science information. It continues with students' projects and other links.

Education World

http://www.educationworld.com/science/elem/human_k_8.shtml

This web site is a link to science from the main site. It covers each grade level from the TEKS' introduction and gives individual information for each TEKS. Different pictures or drawings of images to links in order to get more information about the subject.

Fun Science Gallery

http://www.funsci.com/

A site for amateur scientist with different topics to click on. You get more information on the topic and that can be used for science projects or as instructional experiments. Translations for different languages are available.

Your Weight on Other Worlds.

http://www.exploratorium.edu/ronh/weight/index.html

This website explains the difference between mass and weight, and the funny part is that children can calculate their weight on the planets and several stars. You can see pictures of all the planets.

Welcome to Human Anatomy Online.

http://www.innerbody.com/image/endoov.html

This website is very interesting because explains all the different systems that our body has. I like the language is used. It is very understandable for students. Subject area that covers this website is Life science.

Learn the Real Science behind.

http://ksnn.larc.nasa.gov/pokemon/dna.shtml

This website offers a lot of information in areas such as; Physical, Life, Earth, and Space Science. It offers fun and very interesting activities that teachers might used, to extend the science inquiring. Concepts like; what is a virus?, What is an extraterrestrial?, What is a meteorite?, What is DNA?, What is the ozone layer? Are very well explained here and every concept comes with a different activity.

EXPLORIT Science Center:

The Why Files: Science Behind the News:

http://whyfiles.org/ The Why Files explains the science involved in the current events, stuff that the students probably heard about in the news and did not really understand. It also answers questions that students might be wondering about, for example, ever wondered how snails or salmons mate, or is urine a questionable source of medicine.

Bill Nye the Science Guy:

http://www.billnye.com The "Bill Nye the Science Guy" website is a commercial website that talks about upcoming events involving Bill Nye the scientist that appeared/appears on PBS demonstrating various science concepts. It is a good website that has experiments that can be performed and it provides an explanation of the concepts involved.

http://www.fi.edu/fellows/payton/rocks/

I think that this website has many cool ideas for 5th graders. It contains information about the rock cycle, activities, and articles for kids as well as lesson plans for teachers.

http://kids.mtpe.hq.nasa.gov/ This website contains infinite resources for teachers and students. It explains how people and natural hazards affect global environment. I think this website would be cool to use when addressing the following TEKS:

Science News for Kids

http://www.sciencenewsforkids.org/pages/search.asp?catid=8

This website provides interesting and educational science news articles for young students. The site also has a teacher and lab zone where it provides science activities and experiments that would work well in the classroom.

Tramline Field Trips

http://www.tramline.com/tours/sci/oceank/ tourlaunch1.htm

This website provides virtual science field trips for students of all ages (ranging from baking bread to oceans and deserts). There is also a section where teachers or students can create their own virtual field trip.

Thinking Fountain

http://www.smm.org/sln/tf/b/balance/balance.html

This website gives students the opportunity to perform unique science experiments. The site also ties in other subject areas, in that it gives examples of literature and math problems that relate to the science themes that are presented.

NASA Quest

http://quest.arc.nasa.gov/index.html

Site includes several activities such as PSA which allows users to manipulate the laws of motion, and a section that acknowledges the Women of NASA, plus video web casts. Site also includes a calendar of events that is updated monthly with different activities for users to participate in.

Windows to the Universe

http://www.windows.ucar.edu/

Great interactive site that incorporates multicultural diversity with a hangman game that includes North American, Aztec, and Mayan Indians, Greek, Japanese, and Roman mythology. The site has several activities that are also available in Spanish.

The Science Spot

http://www.sciencespot.net/

This site is useful for both teachers and students, contains lesson plans, science projects, trivia questions, puzzles, and resources. I have personally used this site throughout my internship.

Science Fair Central

http://school.discovery.com/sciencefaircentral/

http://school.discovery.com/lessonplans/programs/forcesandmotion/

Science Fair Central offers many creative investigations. This site provides links for teachers and parents to help their students in science. It gives ideas for science fair projects from topics to commonly asked science fair questions. There is a link to "Science for Fun!" by Janice Van Cleave which provides many projects that can be used in the classroom other links to activities such as Brain Boosters, Clip Art Gallery, Puzzlemaker, and amazing science facts. This site was easy to navigate and can be used

by teachers, parents and students. I found activities related to forces and motion so I would use this website when addressing the following 6th grade TEKS:

Enchanted Learning

http://www.enchantedlearning.com

http://www.enchantedlearning.com/subjects/anatomy/digestive/

Enchanted Learning is a website that can be used by teachers and students. Information can be found by searching by topic. The search results in information, diagram printouts, quizzes and answer sheets (just remember students can access this site.) Enchanted Learning is not limited to science but also has information and links for all subjects. While this website is free, you can pay an annual membership fee of \$20.00 and have access to many more printouts and members search in the advertisement free site. Since this website primarily provides information I would use it to supplement the curriculum. I found information on the digestive system that would correspond to the 6th grade TEKS:

United Streaming

http://www.unitedstreaming.com

United Streaming is a digital video-on-demand service brought to you by Discovery Education. This is an excellent site, unfortunately it is not free, and so you need to check with your school to see if they are subscribers to this service. There is a 30-day free trial that is worth taking advantage of. You can find over 40,000 video clips on a wide range of topics. You can search by topic or by curriculum standards (TEKS.) For a lesson on the solar system I would use a video clip that would meet the 6th grade standard: the sun.

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•	The Nature of a Sound Wave	(2) (A-E) Scientific Processes.	http://physicsclassroom.com/Class/sound/U11L 1a.html	In my first option to do my Mid-Term on Energy and Sound I found this useful resource.
•	The Catapult: Kinetic and Potential Energy	(3) (A-D) Scientific Processes	http://www.lcse.umn.edu/specs/labs/catapult/practice.html NOTE: Browser must have JAVA in order to use virtual catapult	Entertaining site in which students can manipulate and learn by using a virtual catapult.
•	Any Science Subject/Sc ience Project	(5-6) (A-C) Scientific Concepts	http://www.scienceproject.com/projects/index/intermed.asp	This web-site is just full of basic projects students can execute at anytime for any science fair.

National Science Resource Center

http://www.nsrconline.org/curriculum_resources/elementary.html

This website offered curriculum ideas for all subjects and offered experiments. It also offered information on bilingual curriculum.

TEKS: 4.1 The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices.

Enchanted Learning

http://www.enchantedlearning.com/Home.html

This website offers thematic units based on upcoming events, such as St. Patrick's Day. It is divided up into Astronomy, Oceans, Biomes, Inventors and special activities for Pre-K. I especially liked that some activities included rubrics.

Einstein's Legacy

http://www.colorado.edu/physics/2000/einsteins_legacy.html

This website focuses on the subject of technology such as X-rays, Microwaves, Laptops, TV Screens, Lasers and cat scans. There is also a link that explains atoms and light interaction.

The K-8 Aeronautics Internet Textbook

http://wings.avkids.com/

This site is engaging because it offers Aeronautics activities for all levels. It also includes lesson plans and rubrics.

Welcome to Foss Web

This is a very intrusting web cite. In this web cite you can go in to the level of your preference. It is divided into K-2, 3-6, and middle school. As you click your grade level, it will automatically take you in to the activities that will help your students. You can find activities for example, solar energy, measurement, variables and many more. In each activity that you chose you can click to see videos, poster boards and many kinds of neat things. The web cite is the following: http://www.fossweb.com/index.php

Volcanoes

These webs cite is good for fourth grade students. It talks about volcanoes. The web cites tells you everything you need to know about volcanoes. You can see pictures at the same time and clearly understand what it is being explained about the volcano. The web cites is: http://www.learner.org/exhibits/volcanoes/entry.html

In this web cite, you will find a lot of neat things for students. You can pick different areas in which you can go into. In this area you can pick from five different activities. The activities have pictures, sounds, information that really help the student learn and understand the specific area. The web cite is:

http://schools.katyisd.org/groups/pathways/Instr_Ctr/linkslessons/elem/4th/sc/4th_sc.html

http://www.cellsalive.com. I think the students will enjoy the vivid pictures and the animations. The student can interact with the information given by this websites. This website is both educational and entertaining. After a virtual tour of the cycles of the cell the students have the opportunity to asses their comprehension.

<u>http://www.dosciecne.com/index.html-</u> this website has a variety of science activities that students can engage in. These activities help students make sense of the science that students encounter in their everyday lives.

http://wwwspacejpl.nasa.gov
I think it is a great source for students to do their research on the solar system. The virtual tour of the solar system is quite realistic. I sure students will enjoy this one to do their reports

SCI 4 KIDS

http://www.ars.usda.gov/is/kids/

This is a website where children can have general science questions answered about insects, animals, science projects to try at home, aquaculture, plants, and much more.

KIDS WORLD SCIENCE AND MATH

http://www.northvalley.net/kids/science.shtml

This website belongs to a network of websites that deal with lots of different subjects. This particular website helps students with questions, facts, and activities that deal with math and science together a one subject.

FOR KIDS ONLY- EARTH SCIENCE ENTERPRISE: NASA

http://kids.mtpe.hq.nasa.gov/

This website specifically deals with issues in earth science, such as people, land, air, water, and natural hazards. It gives students an explanation of how NASA deals with each of these issues.

Title: Kids Astronomy

URL: http://www.kidsastronomy.com

Content: A great site for students that provides information on the objects of our solar system, astronomical dictionary, and free online classes.

Title: Science Bob

URL: http://sciencebob.com

Content: Helpful site for educators and students in providing information on the human systems, ideas for science fair, home experiments, and follow-up questions for teachers use.

Title: Ology

URL: http://ology.amnh.org/index.html

Content: A great site for students to learn about the different sections in science such as archaeology, astronomy, genetics, and others which include lots of visuals and information.

Thinking Fountain

http://www.smm.org/sln/tf/nav/thinkingfountain.html

This website is full of simple ideas, experiments, and books that can help students to develop hands-on, contextual, and visual understandings of science concepts. The information is also helpful in developing cross-curriculum lessons.

Middle School Science

http://www.middleschoolscience.com/

This website is basically a hub for science content targeting the middle school level. The main sections that I feel would be the most helpful are the Physics, Earth Science, and the Life Science, and the Teachers sections. (The Teachers section provides links to other science teachers' websites.)

Lesson Plan Page.com

http://www.lessonplanspage.com/Science.htm

This website provides actual step by step lesson plans that are designed for science. Once a grade level is selected, then specific areas of study can be selected as well. (The lesson plans also include assessment suggestions and homework ideas.)

http://jersey.uoregon.edu/~mstrick/geology/geology_websites.html

This website has helpful links to activities for the following: Heavyweights, Institutions, Glossaries, Publications, Materials, Tectonics, Seafloor, Volcanology, Regional Studies, Historical, an alternate viewpoint, Underground, Economic, Environmental, Mapping, FieldTrips, and Museums Miscellaneous

http://www.lpi.usra.edu/library/website.shtml

This website is a great tool for studying space. It is apart of the Lunar and planetary Institution. It has many facts about each planet, and the space explorations, and our solar system.

http://shs.westport.k12.ct.us/mjvl/science/earthweb.htm

This website is a great source for Earth Science teachers. It has links to science and technology, technology and science, chemical make ups and chemical build ups, and much, much more. It also has online quizzes.

The Gatorade Sports Science Institute has a web address at www.gssiweb.com. This site is perfect for demonstrating the effects of Gatorade on the body. This type of information provides consumers with data that links scientific research a healthy more energetic body.

http://oceanexplorer.noaa.gov/library/readings/science/science.html is a great web site for discovering the oceans and how they affect the earths land and atmosphere. This site provides good detail on the water cycle, plants and vegetation, winds and tides.

The information contained at http://edtech.kennesaw.edu/web/solar.html is arranged in a format that is easy to follow and very descriptive. This site contains references on the earth and sun, the planets within the solar system as well as the earth's moons. It is a good resource for students and has plenty interesting photos and fun links.

Science.gov

http://www.science.gov/

The first Gov for science is a web-site that provides authoritative selected science information from the U.S. Government.

Ecokids

http://www.ecokidsonline.com/pub/

A colorful site where learners can play while they learn about environmental issues, such

as climate change, habitat and habitat loss, pollution, and waste.

Energy Quest

http://www.energyquest.ca.gov/

By moving the mouse over items in the room on this site, you can find different places to go to learn about energy. There are Puzzles and Games to play to learn about energy; an Energy Time Machine to teach you about historical energy events; Super Scientists you can learn about who were energy pioneers; and Energy Links to other internet resources on energy.

http://www.cellsalive.com/.

The site is called "Cells Alive." This is a Biology site that is complete with animation? The site discusses stages of cell mitosis and various other things. You also observe plant and animal cells. It is a very good site.

http://www.usgs.gov/education.html

"USGS Educational Sites" is a major site that links several branches of Science. You can travel to various other sites, touching the different branches of Science. The site is filled with activities and ideas. There are lesson plans for grades K-12.

http://www.ed.gov/free/index.html.

"Federal Resources for Educational Excellence" is a free site. This is site is full of information. The site not only has Science information, but the other subjects as well. There is information on all sorts of sites to include Education technology.

Volcano World

http://volcano.und.nodak.edu/vw.html

Description: This website entails information about volcanoes, current volcano eruptions. It also takes the viewer along on some volcano adventures. There are even interviews with volcanologists. It has an area for teachers on lesson planning.

Website used to teach students about volcanoes in relation to equilibrium.

Beyond Discovery, National Academy of Science

http://www.beyonddiscovery.org/content/view.page.asp?I=2324

Description: This websites is an excellent tool in informing the reader and describing earthquakes. It is a wonderful teacher tool because it has a lot of vocabulary to help the reader understand information about the geological aspect of this website in the dealings of earthquakes, faults etc.

Website used to teach students about earthquakes in relation to geological faults.

Lunar Phases Web Tool

http://sciencespot.net/Pages/classastro.html

Description: This is another great educational tool. This website offers a tutorial on the time, day, and month of the lunar phases. The main page to this website also offers lessons on various subjects on astronomy.

Website used to teach lunar moon phases.

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Using Technology for Science Investigation/Labs

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http://www.the-solar-system.net/-

This website has 315 web pages with over 340 pictures. This website has 2 purposes: To give a pictorial overview of the solar system and to quiz you about these pictures.

http://www.1001-periodic-table-quiz

questions.com/grade_5_science_quizzes.html-

This web-site contains information and quizes about:

http://www.sciencenewsforkids.org/Science

News for Kids is a new Web site devoted to science news for children of ages 9 to 13. Their goal is to offer timely items of interest to kids, accompanied by suggestions for hands-on activities, books, articles, Web resources, and other useful materials. Their emphasis is on making the Web site appealing by offering kids opportunities to comment on the subject matter, ask questions of scientists featured in articles, try out mathematical puzzles, and submit their own work for possible Web publication. At the same time, we are interested in offering teachers creative ways of using science news in their classrooms.

Website: Missouri Botanical Garden

Web address: http://mbgnet.mobot.org/fresh/cycle/index.htm

This website features the water cycle with pictures along with information that can be used in the classroom. There is also an additional website that has questions that can be used for an assessment, below is the web site.

http://www.davidson.k12.nc.us/webquests/weather/the water cycle.htm

Website: StarChild: A Learning Center for Young Astronomers

Web address: http://starchild.gsfc.nasa.gov/doc/StarChild/StarChild.html

This website features a great amount of information about our solar system and gives pictures of all the planets, their moons, what asteroids and meteorites look like.

Website: Earth Science Explorer

Web Address: http://www.cotf.edu/ete/modules/msese/explorer.html

This website features animated pictures of the different topics of how Earth was during the time of the dinosaurs, super novas, and volcanoes. To topics about Earth such as the biomes, plate tectonics, and the cycles.

The Topic: Volcano

If you were interested in learning about volcanoes, this should be your first stop. This website is designed to help guide you in teaching students all about volcanoes using a variety of methods such as video, web quest, volcano cams, and models that can be done in the classroom.

http://www.42explore.com/volcano.htm

8th Grade Science

This website is a great resource for teaching students about the solar system, geological features such as Tsunamis, weather, earthquakes, and landslides. This is a website that can be used throughout the school year.

http://www.ucls.uchicago.edu/resources/citesforstudents/Science/ScienceGrade8.html

Views of the Solar System

When looking for resources for teaching students about the solar system, this website is wonderful. The website gives extensive information about each aspect of our solar system. I would use this website as a web quest for my students.

http://www.solarviews.com/eng/homepage.htm

Jason Foundation for Education

http://www.jason.org

JASON's award-winning supplementary curricula are designed with the world's leading scientists and educators. They provide rich learning experiences using a hands-on inquiry program that mirrors the work of real researchers. The flexible instructional design allows for cross-curricular integration or single subject implementation across disciplines. Based on national model standards for science, math, social studies, language arts, and technology, and correlated to each state's standards for science, JASON is proven to enhance middle-grade student learning outcomes.

Annenberg/cpblearner.org

http://www.learner.org/exhibits/parkphysics/

Children are able to understand the physical concepts of amusement rides. Kids are able to design their own rides and evaluate their safety and fun rating. Some of the physical concepts are: kinetic and potential energy, slopes, velocity, height, acceleration.

Reader's Chem4kids

http://www.chem4kids.com/

Useful site dedicated for chemistry in the subjects of elements, atoms, reactions, matter and biochemistry. Each concept presents a table of contents that allows children to explore the subject extensively and at their own pace. Each concept contains examples and pictures as well. The site allows the exploration of other subjects with links to biology, geography, physics activity sites, which provide tutorials and activities for their subscribers.

Ology: The Gene Scene. http://ology.amnh.org/genetics/index.html

In this website students will be able to identify genetic material of organisms, genes, DNA, cells. Students will also find hands on activities, for example, they can construct a DNA model.

NASA-Kids Home

http://www.nasa.gov/audience/forkids/home/

In this website students can search for different information related to space, for example, they can look for components of our Solar System such as Sun, planets, comets, moons, etc.

Periodic Table of the Elements at Los Alamos National Laboratory

http://pearl1.lanl.gov/periodic/default.htm

In this website students will be able to explore the characteristics and properties of the elements of the Periodic Table as well as the history of each one of the elements.

""Braincake"

www.braincake.org

This is an online club for middle school girls to interact with their peers about current science topics. Research has found that girls at this age tend to disengage from math and science and focus more on socialization and this site allows them to do both. I checked out force and motion (TEKS 7.6a)

AOL@School/Middle School

www.aolatschool.com

This site has many interactive areas and you can choose by topic or grade level. Lots of great links and lesson plans for teachers also. One plus is that it is educator approved. I decided to check out the solar system (TEKS 7.5a,b 7.6c)

"Factmonster"

www.factmonster.com

Students can access many reference sources here such as the almanac, dictionary, encyclopedia, atlases and much more. There are many interactive games, quizzes, and students can get homework help here. There is also an opportunity for students to mentor and help other students with their homework. I checked out the interactive periodic table (TEKS 7.6b,c)

SEG Student Connections

SEG Student Connections is a great geology website. This website covers many topics that are important for kids to know such as the specials characteristics of Earth, volcanoes, and mountains. This can be a good resource for a 6th grade class when covering earth science. This web site will serve the purpose of engaging students in a constructive and meaningful way. http://students.seg.org/kids/

Science4Kids

Science4Kids is a website that covers significant and current science topics that are of student's interest. I found this website quite helpful when students are assigned to research a topic. The reading in these articles is easy to follow and enjoyable allowing the student to learn. http://www.ars.usda.gov/is/kids/

Bone Biology for Kids

Life science is an important component of the science curriculum, and the internet can be a helpful tool to engage student in topics such as the human body. I found a wonderful website that covers everything that relates to the human skeleton. This website is fun and exciting. It allows students to explore and understand in depth the structure of bones and skeleton. http://depts.washington.edu/bonebio/

The Rock Cycle

www.cotf.edu/ete/modules/msese/earthsysflr/**rock**.html

In this website the students will be able to explore cycles, like the water cycle and the rock cycle. The website contains excellent illustrations to explain the cycles.

Endothermic & Exothermic chemical reactions

chemistry.about.com/cs/generalchemistry/a/aa051903a.htm

In this website students will be able to read about endothermic and exothermic chemical reactions as well as do safe activities that illustrate these two concepts. There is also many topics in science cover on this website and also students can even get help with their homework.

Structure and parts of an atom

www.chem4kids.com/files/atom structure.html

In this website students will be able to see in detail how an atom and its parts work. This website also has very good examples, illustrations, and activities for the students.

The first website I visited was www.referencedesk.org This website has information for just about any topic, but it does have links for the Astronomy pic of the day and Sun and Moon info.

www.niehs.nih.gov/kids-This website is from the National Institue of Environmental Health Science. It has great fun and games for kids as well as experiments on determining how our environment affects our bodies. TEKS 5.2e and 5.9

www.aaas.org/port_kid.shtml-This website posts a Science for Kids story every Thursday. It also has a link for Kinetic City, which has science games for kids to play. Because the story changes every week the teks may vary. The tek that applied on the day I visited the website was 5.9.