Human Evolution Education Resources - Unannotated

May 4, 2011

Please Note:

- Most of these resources are free, but some are not (books, "apps," etc.).
- I have no highly vested interest in promoting any of these sources, except for my desire to see quality educational materials utilized for the benefit of science education in America and around the globe. Please consider supporting one of the not-for-profit organizations to which I link and/or your local PBS television station or, what the heck, National Public Radio.
- A number of these resources cover multiple subtopics, but I tried to avoid redundant listings, so be sure to look through all the sections for what you need.
- Click on the <u>hyperlinks</u> to open websites *or* copy and paste the static URLs into your browser's address bar (all websites accessed May 1-4, 2011, unless otherwise indicated).
- I've included a lot of Twitter handles (e.g., @paleophile) to learn more about Twitter, scroll down to the "Human Evolution in the News" section. To read the Tweets of individuals/organizations on Twitter, go to http://twitter.com/paleophile) or "follow" them on Twitter if you are a registered Twitter user. (*FYI, The Twitter name, logo, Twitter T, Tweet, and Twitter bird are trademarks of Twitter, Inc. in the United States and other countries.)

GENERAL SCIENCE/HUMAN EVOLUTION RESOURCES

<u>The David H. Koch Hall of Human Origins</u> Smithsonian Institution, National Museum of Natural History (NMNH) @HumanOrigins

Anne and Bernard Spitzer Hall of Human Origins American Museum of Natural History (AMNH) @AMNH

PBS NATURE @PBSNature

PBS NOVA and now there is also PBS NOVA Evolution (beta stage) @novapbs

PBS Evolution

BBC - Science and Nature @BBCNature

ARKive @arkive

TED- Ideas Worth Spreading @TEDNews or @TEDtalks]

California Academy of Sciences (CAS) and CAS Discover Science [@calacademy]

University of California Museum of Paleontology (UCMP) ["Like" them on Facebook.]

Howard Hughes Medical Institute BioInteractive (HHMI) [@HHMINews]

<u>SERC Portal for K-12 Educators</u> The Science Education Resource Center (SERC) is an office of Carleton College.

National Center for Case Study Teaching in Science

PHYSICAL ANTHROPOLOGY LABORATORY RESOURCES

<u>Virtual Laboratories for Physical Anthropology 4.0</u> Kappelman, J. Online or CD-Rom-based learning environment.

France Casting Museum Quality Replicas

<u>3D Collections</u> Smithsonian's National Museum of Natural History Human Origins Program, 3D Fossil Collection.

HUMAN GENETICS

Books:

Alexander, D. R. The Language of Genetics: An Introduction. Templeton Press, 2011.

Ridley, M. Genome: The Autobiography of a Species in 23 chapters. Harper Collins, 1999.

Web materials:

Cold Spring Harbor Laboratory's Dolan DNA Learning Center

Scitable Genetics Topic Room Nature Education

Scitable Essentials of Genetics eBook Nature Education

Human Genome Resources National Center for Biotechnology Information (NCBI)

"Making sense of ancient hominin DNA" UCMP, on the Understanding Evolution website.

Ancient DNA and Neandertals NMNH

Human Skin Color Variation NMNH

National Center for Case Study Teaching in Science National Science Foundation.

FORM AND FUNCTION OF THE HUMAN BODY

Web materials:

eSkeletons The University of Texas at Austin

AnatomyLab.com

The Body Interactives BBC Science

Genes to Cognition Online 3D Brain Anatomy

The Zoo of You PBS NOVA Evolution

<u>Darwin's Birthday Suit: The Evolution of Human Skin and Skin Color</u> Lecture, Jablonski, N. (Feb. 10, 2009) Audio podcast (.mp3 stream/download) and written transcript.

McGraw Hill's Anatomy & Physiology Revealed in partnership with the University of Toledo. Online or CD-Rom-based learning environment.

NON-HUMAN PRIMATES

Web resources:

Arkive.org

Animal Diversity Web University of Michigan Museum of Zoology

<u>Primate Info Net</u> Library and Information Service of the National Primate Research Center, University of Wisconsin-Madison

African Primates Online journal.

<u>Various organizations dedicated to ape conservation: Center for Great Apes, the Jane Goodall Institute,</u> The Orangutan Land Trust, Bonobo Conservation Initiative, International Gorilla Conservation

The Stangardin Land Trust, Bonood Conservation Intelligence, International Collins Co.

Programme, The Dian Fossey Gorilla Fund International

GEOLOGY/PALEONTOLOGY

Web resources:

USGS Education

Teach the Earth SERC

Earth: A dynamic structure Short Course UCMP

Understanding Geologic Time UCMP

<u>Deep time in perspective: An animated fossil hominin timeline</u> Dunsworth, H. M. *PaleoAnthropology* 2011: 13-17. [This link actually takes you to a post (April 8, 2011) on the blog, "The Mermaid's Tale," where the author of the deep time movie discusses the content of and background for this online, animated demonstration of deep time.]

The Paleontology Portal UCMP

Dating NMNH

Adventures in the Rift Valley: Interactive NMNH

SYSTEMATICS/CLASSIFICATION

Web resources:

The history of life: Looking at the patterns UCMP

A name by any other tree Thanukos, A. Evolution: Education and Outreach (April 18, 2009) [Available

free as a .pdf at http://www.springerlink.com/content/k176638503p63017/fulltext.pdf]

Travels in the Great Tree of Life Yale University Peabody Museum of Natural History

Time Tree ASU Biodesign Institute/Penn State

Taxonomy Browser NCBI

EVOLUTION

Book:

Zimmer, C. The Tangled Bank: An Introduction to Evolution Roberts & Company Publishers, 2010

Web resources:

Understanding Evolution UCMP

PBS Evolution

National Center for Science Education

The National Evolutionary Synthesis Center Education Resources NESCent is jointly operated by Duke

University, UNC at Chapel Hill, and North Carolina State University

Evolution 3rd Ed. Ridley, M., Blackwell Publishing, 2003

THE HOMININ FOSSIL RECORD

Books:

Johanson, D. C. & Wong, K. Lucy's Legacy: The Quest for Human Origins. Harmony Books, 2009

Johanson, D. C. & Edgar, B. with David Brill photography. <u>From Lucy to Language</u>. Simon & Schuster, updated 2006.

Potts, R. & Sloan, C. What Does It Mean To Be Human? National Geographic, 2010.

Physical Anthropology Booklist.pdf [Here is a list of other books.]]

Web resources:

Human Evolution Timeline Interactive NMNH

<u>The Human Lineage Through Time</u> Becoming Human, Institute of Human Origins (IHO), Arizona State University

Human Family Tree NMNH

Hominin Fossil, Primate and Artifact Collections (2D and 3D) NMNH

Human Evolution: The fossil evidence in 3D Walker, P. L. & Hagen, E. H. UC Santa Barbara.

eLucy The University of Texas at Austin

Becoming Human Institute of Human Origins, Arizona State University

Discovering Ardi Discovery Channel

HUMAN EVOLUTION IN THE NEWS

[Cambridge Science Festival Not familiar with web blogs or Tweets? Watch this Cambridge Science Festival video podcast (May 3, 2011) to hear some of the bloggers listed below talk about how blogs, tweets, and social media are changing science writing.]

ScienceBlogs

The Loom (a Discover blog) Carl Zimmer [@carlzimmer]

Not Exactly Rocket Science (a Discover blog) Ed Yong [@edyong209]

Tooth and Claw (a PLoS blog) Hillary Rosner [@hillaryrosner]

John Hawks Weblog (blog) Dr. John Hawks [@johnhawks]

<u>Lawn Chair Anthropology</u> (blog) Graduate students at the University of Michigan in biological anthropology

Afarensis: Anthropology, Evolution and Science (blog) Timothy S. McDougald

A Very Remote Period Indeed (blog) Dr. Julien Riel-Salvatore

Anthropology in Practice (blog) Krystal D'Costa [@anthinpractice]

Kathryn B. H. Clancy, PhD [@KateClancy]

Kate Wong [@katewong]

Ann Gibbons

KOED Science [@KOEDscience]

ScienceDaily [@sciencedaily]

<u>LiveScience</u> [@LiveScience]

American Scientist Magazine [@AmSciMag]

Scientific American Newsletters [@sciam]

<u>Human Origins Program Events</u> NMNH [@HumanOrigins]

PROFESSIONAL SOCIETIES/ASSOCIATIONS/FOUNDATIONS

Paleoanthropology Society

American Anthropological Association [@AmerAnthroAssoc and @AAAPubs]

The Leakey Foundation [@TheLeakeyFndtn]

American Association for the Advancement of Science [@AAAS_News]

National Science Foundation [@NSF]

Society of Vertebrate Paleontology [@SVP_vertpaleo]

National Center for Science Education [@NCSE]

The Society for Integrative & Comparative Biology

The Society for the Study of Evolution

American Institute of Biological Sciences [@AIBSbiology]

National Geographic [@NatGeoScience, @NatGeoNewsWatch, @NatGeoEducation]

SCIENTIFIC JOURNALS

Open Access Web Journals:

Directory of Open Access Journals

BMC Genomics

BMC Evolutionary Biology

PLoS Genetics

PLoS Biology

Trends in Evolutionary Biology

Genome Biology and Evolution

Ideas in Ecology and Evolution

Journal of STEM Education: Innovations and Research

Restricted Access Journals:

Scientific Journals List.pdf

PALEOANTHROPOLOGY/ARCHAEOLOGY FIELD SCHOOLS

The Smithsonian National Museum of Natural History (NMNH) has compiled a list here.