Research Paper #1: Biological Anthropology

In this assignment you will write a 1200-word (4 to 5 page) research report on adaptive events within human biological evolution. Specifically, you will be responsible for retrieving two very particular pieces of information to use in this report, following the research steps described below. This is an assignment designed to familiarize you with the process of library research, citation, and summarization of written work common to anthropology and other social sciences.

ESSAY ASSIGNMENT QUESTION:
Write a 1200-word paper discussing human genetic adaptation. You should use the resources from the research steps provided to describe and explain genetic and biological similarities and differences between humans (Homo sapiens) and chimpanzees (Pan troglodytes). Be sure to describe the relationship between specific genotypes and phenotypes. You should also use the resources from your research to demonstrate the relationship between brain size and the ability to run upright emphasizes the differences between species. You will find that the scholarly resources already provided for you in the following research steps will inform you about each of these issues.

A. PREPARATORY STEPS:
For this paper you will use at least four research sources. These represent scholarly journal and periodical contributions which are the type of sources that you will be required to use in all college-level research papers. Check the box ☑ next to each step below as you complete them.

☐ A1. First, go to the Library website (at http://library.morrisville.edu) and click the “Articles” link, click “Find Articles by Database…” then click on the fourth database down the list titled Academic Search Complete (run by “EbscoHost”). Type the search term “what makes us human” into the top-left search box. Also look below at the “Limit Your Results” (or “Limiters”) section below on the left and select Full Text (check the box). Now, click “Search”. Article #2 of the first page of results, titled “What Makes Us Human?” by Katherine Pollard (SciAm, May 2009, Vol 300 Issue 5) is the one you want. Click on the “HTML Full Text” link. Print and save/email the article to yourself. In your paper, you will use this article to explain why chimps and humans differ so profoundly despite a very similar DNA structure.

☐ A2. Second, click the “EbscoHost” logo (upper-left at the top of the page) to start a new Academic Search Complete search and type “bipedalism” into the first search box. In the second search box type the word “Summers”. You will find Article #1 is called “Born to Run” by Adam Summers from the April 2005 issue of the journal Natural History. Open the article by clicking “HTML full text” then print and save/email the article. Note, when reading the article on your computer, you can use the Ctrl-F function in your browser to search for the term “bipedalism” within the article itself. In your paper, you should use the information you find to discuss how bipedal running played an important role in shaping our species.

☐ A3, ☐ A4. Third and fourth, use the database search engine in the same way as you did above to find two more articles of your choosing to help explain how our human evolution from a common ancestor with chimpanzees has made each (Homo sapiens and chimps, or Pan troglodytes) into the biological creature it is today.
B. WRITING STEPS:

□ B1. Write an outline showing how you are going to organize your essay (the question presupposes some type of organization). On the outline and following drafts (including the final draft), title your paper “Similarities and Differences between Pan troglodytes and Homo sapiens”.

□ B2. This paper should have a thesis that humans evolved along a different line of descent than chimpanzees, but that we share a common ancestor. Specific evidence for this should be discussed in the paper and examples of the genetic differences can be taken from the articles you obtained in the provided articles and in your research. Integrate each of the sources you found above into the body of your outline. Note in your outline where your sources would be appropriate to reference with a quotation from the source or a paraphrase. Be prepared to properly cite all evidence you use from your research sources.

□ B3. Write a rough draft of your paper. Don’t worry about spelling or grammar just yet – but be sure that what you are writing makes some kind of sense (that it is logically consistent and scientifically rigorous, as well as properly cited, and fulfills the rubric requirements).

□ B4. Collect all of the citations made throughout the paper and make a References page. APA style format should be used for citation writing in the text of your paper (body citation) and for the References page. Other APA style formatting (abstract, running head, etc.) is optional. Here is an example of APA citation style:

In-text (body) citation: If you directly quote the author of an article you found online titled “The human paradox that is common sense” from the periodical New Scientist written by Duncan Watts published in 2011 to emphasize the idea from the article that “Common sense is exquisitely adapted to handling the kind of complexity that arises in everyday situations” (Watts 2011), you should cite the source right there in parentheses after the quote, noting the last name of the author of the article (Duncan Watts) and then noting that the article was published in 2011. That’s all the reference you need in the body. This serves as an indicator of what to look for on the References page.

Reference page citation: Now, you must make sure that on your References page you have a complete citation to Duncan Watts’ article from New Scientist. Here’s an example of what it should look like:


Alphabetize your list of references. Also, note the “hanging indent” of the second line (this feature is available in MS Word); this allows for authors’ names to be easily seen.

□ B5. Finalize your draft by reading the paper aloud to yourself, and proofread it for grammar and spelling errors. Check over all citations and the references page one last time. The paper should be 1200 words (4 to 5 pages), typed, double-spaced, 10-12 point font and emailed in PDF format to reymers@morrisville.edu using the filename convention of LASTNAME ANTH Paper.pdf (where LASTNAME is your last name) on or before 5pm Friday, March 4 for full credit.

This paper will be graded according to the rubric handed out with the assignment and on the course webpage. This paper is worth 20% of your final grade.
GRADING RUBRIC

Meta-content (10 pts each):

_____ Title that reflects the assignment instructions; follows formatting guidelines

_____ Thesis statement/question appears in opening section; is it clear? 
   Reiteration of thesis in conclusion

_____ Cite sources properly in-text (APA format body citation)

_____ Complete and accurate References section (APA format References page)

_____ Minimal grammatical errors – evidence paper has been proofread and edited

Research-specific content (10 pts each):

_____ Discussion of basic similarities between *Homo sapiens* and *Pan troglodytes*, particularly the percentage similarity in our DNA and our comparative anatomy

_____ Description of Pollard article: relationship of *H. sapiens* genotypes to phenotypes determined by HAR1 (cerebral cortex), HAR2 (thumb and wrist), FOXP2 (language), AMY1 (salivary enzyme), LCT (lactose enzyme), ASPM (brain size), PtERV1 (virus) & TRIM5α (prevents viral replication)

_____ Description of Summers article: relationship of the anatomical similarities and differences between primates and humans, including longer legs, narrow waist, shorter toes, the foot arch, Achilles tendon, gluteus maximus (butt) muscles, trapezius (shoulder) muscles, and the inner ear

_____ Relationship of explanation to reason for evolutionary development (exs: HAR2 linked to human tool-use, running linked to migration behavior of early man, or semicircular canal change related to running); examination of the relationships between genotype and phenotype

_____ Integrates course ideas and content to the description and discussion; paper length is sufficient

___________________ % TOTAL

Legend for paper errors:

f.e. = factual error

o.e. = omission error

c.e. = citation error

g.e. = grammar error

s.e. = style error