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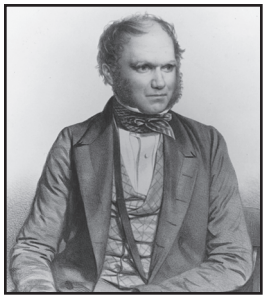

UNIT 1
Evolutionary Perspectives

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1. **Was Darwin Wrong?,** David Quammen, *Online Extra, National Geographic Magazine,* November 2004
   Evolutionary theory is not just an ephemeral guess, but is ***a well-established set of concepts*** that has come to be critically important to ***human welfare, medical science,*** and ***understanding the world around us.*** **2**

2. **The Facts of Evolution,** Michael Shermer, from *Why Darwin Matters,* Henry Holt & Co., 2006
   Evolutionary theory is rooted in a rich array of data from the past. While the specifics of evolution are still being studied and unraveled, the general theory is the ***most tested in science,*** tests spanning the past century and a half. **8**

3. **Evolution in Action,** Jonathan Weiner, *Natural History,* November 2005
   More than 250 scientists around the world are ***documenting evolution in action.*** Some of the most dramatic cases are those that result from the ***ecological pressures*** that human beings are imposing on the planet. **15**

4. **The Other Darwinism,** Frans de Waal, from *The Age of Empathy,* Harmony Books, 2009
   Some have interpreted Darwin's ***theory of natural selection*** as a validation of dog-eat-dog ***laissez-faire capitalism.*** Frans de Waal cautions that while competition is a factor in how evolution works, so are ***cooperation and empathy.*** **19**

5. **The Latest Face of Creationism,** Glenn Branch and Eugenie C. Scott, *Scientific American,* January 2009
   Creationists have long ***battled against*** **the** ***teaching of evolution*** in the classroom. Because of a series of ***legal setbacks,*** their ***strategies*** have had to evolve from promoting their own perspective to ***undermining science literacy.*** **26**

6. **Why Should Students Learn Evolution?,** Brian J. Alters and Sandra M. Alters, *Defending Evolution in the Classroom,* Jones & Bartlett Publishers, Inc., 2001
   In explaining how organisms of today got to be the way they are, the ***evolutionary perspective*** helps us to make sense of the ***history of life*** and explains relationships among species. It is an ***essential framework*** within which scientists organize and interpret ***observations,*** and make ***predictions about the living world.*** **32**

The concepts in bold italics are developed in the article. For further expansion, please refer to the Topic Guide.

UNIT 2
Primates

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7. **First, Kill the Babies,** Carl Zimmer, *Discover,* September 1996
Infanticide has been found to exist among many primate species in addition to other kinds of animals. At first, it seemed to contradict ***one of the hallmarks of primate social life—long time intimate care of the young.*** Yet, another view is that it is part of ***an alternative reproductive strategy*** that enhances the fitness and survival of the next generation. 38

8. **Married to the Mob,** Sharon Gursky-Doyen, *Natural History,* October 2010
Once thought to be solitary, reclusive creatures, the hard-to-track, nocturnal ***spectral tarsiers*** have been found to be ***aggressive in the face of predators,*** flexible in their ***family arrangements,*** and quite ***social*** when they need to be. 43

9. **Mission Orangutan,** Bill Brubaker, *Smithsonian,* December 2010
Over the past three decades, ***palm oil plantations*** have been destroying ***one of the most ecologically diverse rainforests*** in the world. During this time, about ***3,000 orangutans have died each year as their habitat is literally removed from underneath them.*** While ***Biruté Galdikas*** has been studying the orangutans for the past 40 years, she has also been ***doing her best to protect them.*** She has won some battles, but can she win the war? 48

10. **The 2% Difference,** Robert Sapolsky, *Discover,* April 2006
Now that scientists have decoded the ***chimpanzee genome,*** we know that we share ***98% of our DNA with chimps.*** So how can we be so different? The answer lies in the fact that a ***very few mutations*** make for some ***very big differences.*** 52

11. **The Mind of the Chimpanzee,** Jane Goodall, from *Through a Window,* Houghton Mifflin, 1990
It has long been recognized that the differences in anatomy and physiology between apes and humans is only a matter of degree. Because of the work of Jane Goodall, we have come to realize that there is continuity in the ***mental*** and ***emotional developments*** as well. 55

12. **Got Culture?,** Craig Stanford, from *Significant Others,* Basic Books, 2001
The study of the ***rudimentary cultural abilities*** of the ***chimpanzee*** not only sharpens our understanding of our uniqueness as humans, but it also suggests an ***ancient ancestry*** of the ***mental abilities*** that we and the chimpanzees have in common. 60

13. **Dim Forest, Bright Chimps,** Christophe Boesch and Hedwige Boesch-Achermann, *Natural History,* September 1991
Contrary to expectations, forest-dwelling ***chimpanzees*** seem to be more committed to ***cooperative hunting*** and ***tool use*** than are savanna chimpanzees. Such findings may have implications for the understanding of the course of human evolution. 64

14. **Peace Among Primates,** Robert M. Sapolsky, *Greater Good Magazine,* April 5, April 12, April 20, 2008
Are we humans hard-wired for violence? Recent studies indicate that the behavior of at least some primate species, and certainly our own, is ***driven by the social structures and ecological settings,*** not simply by our genes. 68

The concepts in bold italics are developed in the article. For further expansion, please refer to the Topic Guide.

UNIT 3
Sex and Gender

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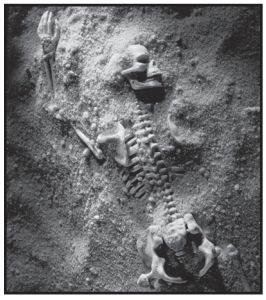
15. **What Are Friends For?,** Barbara Smuts, *Natural History,* February 1987
An understanding of ***friendship bonds*** that exist among baboons is not only destroying our stereotypes about monkeys in the wild, but is also calling into question the traditional views concerning the ***relationships*** between the ***sexes*** in early hominid evolution. 74

16. **What's Love Got to Do with It?: Sex among Our Closest Relatives Is a Rather Open Affair,** Meredith F. Small, *Discover,* June 1992
The ***bonobos'*** use of sex to reduce tension and to form ***alliances*** is raising some interesting questions regarding human evolution. Does this behavior help to explain the origin of our ***sexuality?*** Or should we see it as just another primate aberration that occurred after the split from the human lineage? 80

17. **The Double Life of Women,** Annie Murphy Paul, *Psychology Today,* November/December 2010
Women actually have two sexualities, one when they are ***ovulating*** and the other during the rest of the month. Moreover, the invisible turns of the ***reproductive cycle*** shape the everyday behavior of both women and men as ***her cycle influences*** not just ***her preference in a partner,*** but her ***personality*** as well. 84

18. **Why Women Live Longer,** Thomas Kirkwood, *Scientific American,* November 2010
The ***life expectancy of women,*** on average, is significantly greater than that of men. Although many theories have been put forth, usually involving differences in lifestyle, the overriding factor seems to be that ***women are the procreators of the world*** and that ***men, once they have passed on their genes, are a little more expendable.*** 88

19. **Mothers and Others,** Sarah Blaffer Hrdy, *Natural History,* May 2001
In many species, including our own, ***mothers are assisted*** in rearing their offspring by others. The more we adhere to this evolutionary heritage of ***"cooperative breeding,"*** the more likely we are to raise ***emotionally healthy children.*** 90



UNIT 4
The Fossil Evidence

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20. **The Human Family's Earliest Ancestors,** Ann Gibbons, *Smithsonian,* March 2010
A rare hominid skeleton from 4.4 million years ago displays some surprising features, such as a skull and pelvis that hint at ***upright walking*** combined with hands and feet that show ***a facility for climbing trees.*** Is she our direct ancestor or an early offshoot? 98

21. **Scavenger Hunt,** Pat Shipman, *Natural History,* April 1984
Microscopic analyses of tooth wear and cut marks on bones, combined with an increased understanding of the advantages of ***bipedalism,*** point in the direction of a ***"Man the Scavenger"*** model rather than ***"Man the Hunter."*** 102

22. **The Scavenging of "Peking Man,"** Noel T. Boaz and Russell L. Ciochon, *Natural History,* March 2001
Dragon Bone Hill in China is the site of the cave that yielded the first, and the still largest, cache of fossils of ***Homo erectus pekinensis.*** In the process of applying ***new methods of analysis*** to the evidence, the authors try to determine whether these relatives of ours used ***fire,*** and whether they were ***cannibals, hunters,*** or ***the hunted.*** 106

The concepts in bold italics are developed in the article. For further expansion, please refer to the Topic Guide.

UNIT 5
Late Hominid Evolution

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23. Hard Times among the Neanderthals, Erik Trinkaus, *Natural History,* December 1978
In spite of the coarseness of their lifestyle and the apparent ***violence*** between individuals, ***Neanderthal*** skeletal remains reveal a prehistoric record of affection and respect, and they should be accorded the status of ***human beings.*** 114

24. Rethinking Neanderthals, Joe Alper, *Smithsonian,* June 2003
Contrary to the widely held view that ***Neanderthals*** were evolutionary failures, the fact is that they persisted through some of the harshest climates imaginable. Over a period of 200,000 years, they had made some rather ***sophisticated tools*** and have had a ***social life*** that involved taking care of the wounded and burying the dead. 120

25. Twilight of the Neandertals, Kate Wong, *Scientific American,* August 2009
With their large brains and enormous strength, ***Neanderthals*** were well suited to the rigors of hunting ice age mammals. But as the ***climate changed*** and a ***new kind of human appeared*** on the landscape, their numbers dwindled and ***they could no longer compete.*** 124

26. A New View of the Birth of *Homo sapiens,* Ann Gibbons, *Science,* January 28, 2011
Did ***modern humans*** come out of Africa, spread around the world and replace, rather than mate with, the ***archaic humans*** they met? ***New genomic data*** is shedding light on this decades-long dispute. It appears that neither the ***out-of-Africa replacement model*** nor the ***multi-regional hypothesis*** will completely win out. 129

27. Meet the New Human Family, Jill Neimark, *Discover,* May 2011
There was a time when ***our ancestors*** shared the planet with ***other human species.*** Today, we stand alone, but the remains of the others, in the form of ***fossils*** as well as in the record of our ***DNA,*** tell ***remarkable stories.*** 132

28. Refuting a Myth About Human Origins, John J. Shea, *American Scientist,* March/April 2011
For decades, archeologists have believed that ***modern human behavior as reflected in tools and food-getting strategies*** developed along with what is identified in the fossil record as ***"modern Homo sapiens,"*** but ***archeological evidence*** now shows that some of these behaviors, most importantly ***our capacity for wide behavioral variability,*** actually occurred among people who had lived very long ago, particularly in Africa. 138

29. The Birth of Childhood, Ann Gibbons, *Science Magazine,* November 14, 2008
Unlike our closest relatives, the apes, ***humans depend on their parents for a long period*** after weaning. ***New investigative technology*** has allowed researchers to determine ***when and why our long childhood evolved.*** 144

30. A Bigger, Better Brain, Maddalena Bearzi and Craig Stanford, *American Scientist,* September/October 2010
The ***diverse food-getting strategies employed by dolphin and ape societies*** are an excellent gauge of their social complexity as well as an example of how ***brain complexity, social complexity, and ecological complexity are all linked.*** 148

31. The Naked Truth, Nina G. Jablonski, *Scientific American,* February 2010
Recent findings lay bare the ***origins of human hairlessness*** and hint that naked skin was a key factor in the emergence of other human traits, such as the ***ability to cover long distances in the pursuit of food.*** 154

The concepts in bold italics are developed in the article. For further expansion, please refer to the Topic Guide.

UNIT 6
Human Diversity

Unit Overview 160

32. Can White Men Jump?: Ethnicity, Genes, Culture, and Success, David Shenk from *The Genius in All of Us,* Doubleday, 2010
Clusters of ***ethnic and geographical athletic success*** prompt ***suspicions of hidden genetic advantages. The real advantages are much more cultural,*** more nuanced, and less hidden. 162

33. Skin Deep, Nina G. Jablonski and George Chaplin, *Scientific American,* October 2002
Although recent ***migrations*** and ***cultural adaptation*** tend to complicate the picture, ***human skin color*** has evolved to be dark enough to prevent sunlight from destroying the nutrient ***folate,*** but light enough to foster the production of ***vitamin D.*** 166

34. How Real Is Race?: Using Anthropology to Make Sense of Human Diversity, Carol Mukhopadhyay and Rosemary C. Henze, *Phi Delta Kappan,* May 2003
The authors claim that ***race is not a scientifically valid biological category.*** Instead, looking at it as a historically specific way of thinking about categorizing and treating human beings, ***race can be seen as a cultural invention.*** 170

35. The Tall and the Short of It, Barry Bogin, *Discover,* February 1998
Rather than being able to adapt to a single environment, we can, thanks to our ***genetically endowed plasticity,*** change our bodies to cope with a wide variety of environments. In this light, research suggests that we can use the average ***height*** of any group of people as a barometer of the ***health*** of that particular society. 178

36. Dead Men Do Tell Tales, William R. Maples, from *Dead Men Do Tell Tales,* Broadway Books, 1994
This classic piece by Maples maintains its relevance as a plea for the continued and expanded use of ***forensic anthropology.*** There are just too many ***stories yet to be told*** and so much ***justice yet to be carried out.*** 182

UNIT 7
Living with the Past

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37. The Viral Superhighway, George J. Armelagos, *The Sciences,* January/February 1998
The modern world is becoming a ***viral superhighway.*** Environmental disruptions and international travel have brought on a new era of human illness, one marked by new diabolical ***diseases.*** 188

38. The Perfect Plague, Jared Diamond and Nathan Wolfe, *Discover,* November 2008
Globalization, changing climate, and the threat of ***drug resistance*** have conspired to set the stage for that ***perfect microbial storm;*** a situation in which an emerging pathogen—another HIV or smallpox perhaps—might burst on the scene and kill millions of people before we can respond. 193

39. The Inuit Paradox, Patricia Gadsby, *Discover,* October 2004
The ***traditional diet*** of the Far North, with its ***high-protein, high-fat*** content, shows that there are no essential foods—only ***essential nutrients.*** 198

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40. Dr. Darwin, Lori Oliwenstein, *Discover,* October 1995
The application of ***Darwin's theory of evolution*** to the understanding of ***human diseases*** will not only help us better treat the symptoms of diseases, but also helps us understand how microbes and humans have evolved in relation to one another. **203**

41. Curse and Blessing of the Ghetto, Jared Diamond, *Discover,* March 1991
Tay-Sachs disease is a choosy killer, one that targeted Eastern European Jews above all others for centuries. By decoding its lethal logic, we can learn a great deal about how ***genetic diseases*** evolve—and how they can be conquered. **207**

42. Ironing It Out, Sharon Moalem, from *Survival of the Sickest,* HarperCollins, 2007
Hemochromatosis is a ***hereditary disease*** that disrupts the human body's ***ability to metabolize iron.*** To understand why such a deadly disease would be bred into our genetic code, we need to take a closer look at ***European history,*** the ***bubonic plague,*** and ***medical practices that were discredited.*** **212**

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