

**FIELD TRIP: AMERICAN MUSEUM OF NATURAL HISTORY  
HALL OF HUMAN ORIGINS**

**INTRODUCTION**

The newly opened Spitzer Hall of Human Origins presents the remarkable history of human evolution from our earliest ancestors millions of years ago to modern *Homo sapiens*. The exhibit combines the most up-to-date discoveries in the fossil record with the latest in genomic science to explore the most profound mysteries of humankind.

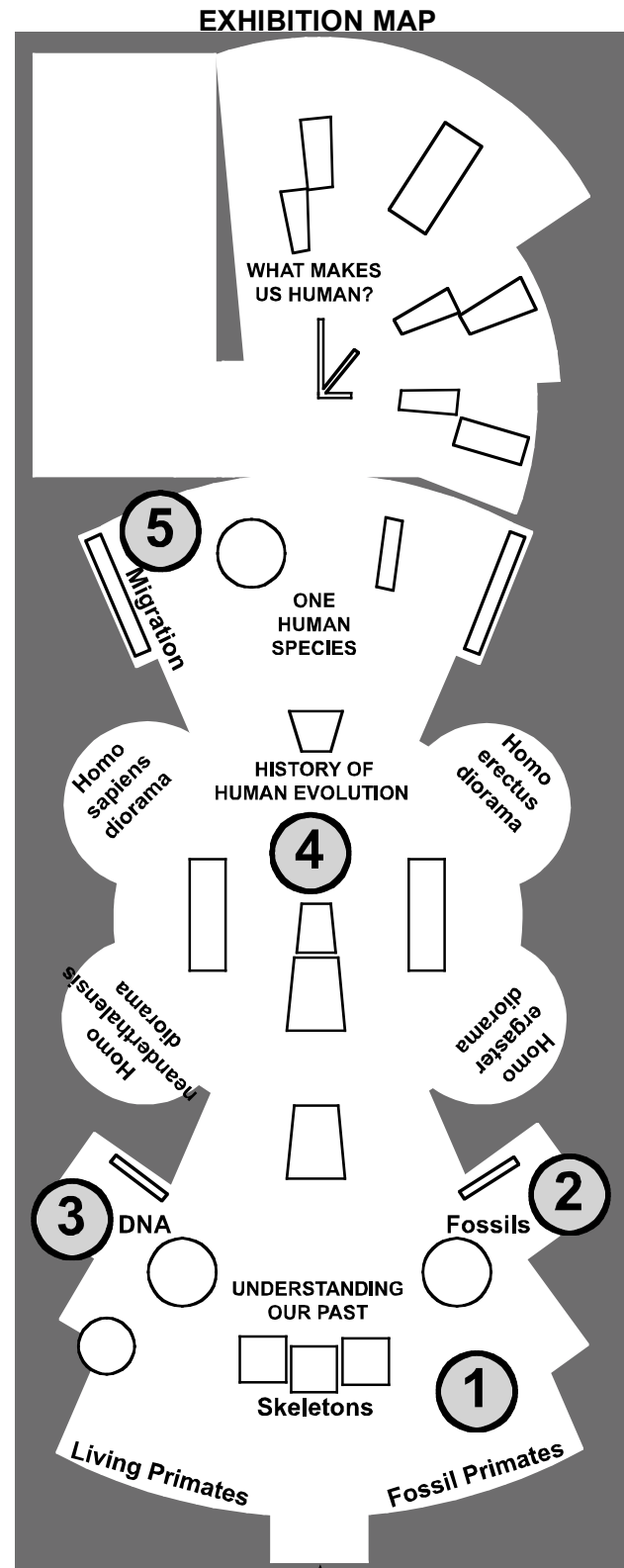
This hall is about all of us—about who we are and where we come from. Although the human family originated many millions of years ago, we know a great deal about our remarkable past. The rich human fossil record dates back more than six million years, and scientists are finding exciting new specimens all the time.

The emerging field of genomics enables researchers to use the countless genetic clues in human DNA to understand more about our identity, both past and present. Fossil evidence and genomic information powerfully agree on many points, and are helping scientists piece together the origin and evolution of the entire hominid family, including our species, *Homo sapiens*.

Humans share a surprising array of traits with modern apes such as chimpanzees and with extinct species like Neanderthals. Yet there are also important differences. What makes our species unique? What makes us human? This hall reveals what makes all of us members of *Homo sapiens* — and how our extraordinary species came to be.

**INSTRUCTIONS**

Included at the right is a map of the exhibit. Go to each location of the exhibit and **observe** the display, **read** the material, and **think** about what has been presented to you. Only after that, answer the questions assigned to each location. You do not have to go to the locations in any particular order, but you do have to pay attention to detail!



**LOCATION 1: PRIMATES OF THE PAST**

1. Observe the skeletons of the chimpanzee, the modern human, and the Neanderthal at the start of the exhibition. Describe the differences between their:

a. skulls: \_\_\_\_\_  
\_\_\_\_\_

b. pelvises: \_\_\_\_\_  
\_\_\_\_\_

c. feet: \_\_\_\_\_  
\_\_\_\_\_

2. Is the Neanderthal more similar to the modern human skeleton or to the chimpanzee?

\_\_\_\_\_

3. From the “Fossil Primate” display, list **two** traits that are **changing** as you move through the fossils from very early primate (56mya) to modern primates (8mya).

a. \_\_\_\_\_

b. \_\_\_\_\_

4. On the “Hands-On Fossil” table:

a. Did Neanderthal walk on two feet or four? What evidence is used to determine that?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b. Which jaw came from a primate that ate tough food, like tubers? What evidence is used to determine that?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**LOCATION 2: OUR FAMILY TREE**

5. What is this “Family Tree” diagram illustrating?

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6. What do the dashed lines represent?

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7. Explain what the faded lines in the tree diagram represent.

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8. Based on this hominid tree diagram, is Neanderthal a direct ancestor of modern humans? Explain.

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9. Watch the video “Reconstructions: Faces from Fossils” and briefly explain how scientists reconstruct a complete body out of a fossil skeleton?

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10. How many species of **hominids** are alive today? Which? \_\_\_\_\_

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11. Was there a time in the past when more than one species of hominids was alive at the same time? Explain.

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**LOCATION 3: DNA EVIDENCE**

12. What type of DNA is used to track:

a. Female ancestry? \_\_\_\_\_

Why? \_\_\_\_\_

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b. Male ancestry? \_\_\_\_\_

Why? \_\_\_\_\_

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13. What is a mutation? \_\_\_\_\_

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**LOCATION 4: WE LOVE LUCY!**

14. Find the skeleton known as "Lucy".

a. How long ago did she live? \_\_\_\_\_

b. What does she have in common with modern humans? \_\_\_\_\_

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c. How is she different than modern humans? \_\_\_\_\_

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Name \_\_\_\_\_

Biology

d. Why is Lucy's fossil so significant? \_\_\_\_\_

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15. Near "Lucy", find the fossil footprints. (Pssst, look down...you may be standing on them!)

a. What is a trace fossil? \_\_\_\_\_

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b. What does this fossil tell you about the creatures that left the footprints?

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### **LOCATION 5: HUMAN MIGRATION MAP**

16. Where did modern humans first evolve? \_\_\_\_\_

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17. When did modern humans first emigrate out of Africa? \_\_\_\_\_

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18. When did modern humans first arrive in North America? \_\_\_\_\_

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19. Here's a question to think about... Based on where modern humans first evolved, what color can you assume our skin was originally?

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**BONUS:** Who is this Hall of Human Origins named after...and what does this have to do with the Governor of New York State?

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**FIELD TRIP: AMERICAN MUSEUM OF NATURAL HISTORY  
HALL OF BIODIVERSITY**

The Hall of Biodiversity, which opened in the spring of 1998, addresses the variety and interdependence of all living things. It celebrates the beauty, diversity, and abundance of life on Earth while warning of the threats posed by human activity.

The Hall is organized around four questions. Take notes below to answer each question:

20. What is biodiversity?

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21. Why is biodiversity important?

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22. What are the threats to biodiversity?

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23. What can be done to protect biodiversity?

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24. Examine the characteristics—feet, feathers, bills, skin, fur, leaves, patterns, colors, legs, etc.— of 5 different animals or plants and complete the chart below.

<b>Organism</b>	<b>Habitat</b>	<b>Movement</b>	<b>Food</b>	<b>Risky Characteristics</b>	<b>Additional Info.</b>