

MAPPING OUR ROOTS



ESSENTIAL QUESTION

Where in the world did all human beings come from, and why does it matter?



OBJECTIVES

Students will:

- Identify evidence about the origins of humanity and the nature of human evolution.
- Apply map skills and chronological reasoning to understand the migration patterns of early humans.
- Explain the significance of Africa as the geographical source of humankind.
- Discuss how racial and cultural perspectives about Africa and African people have influenced scientists' beliefs about the origins of humanity.



LEARNING STANDARDS

See the [standards alignment chart](#) to learn how this lesson supports New Jersey State Standards.



TIME NEEDED

60 minutes



MATERIALS

- Copies (one per student) of or digital access to the article “Finding Lucy: The Leakeys and the Search for Human Origins”: <https://newsela.com/read/BHP-U6-3-lucy-leakey/id/3759>.
- *Map of Human Migration* handout (one per small group)
- *Connect the Dots* handouts (each small group needs copies for one region; there are four different regions in all—Australia, East/Southeast Asia, Western Europe, and the Americas)
- World atlas (one per small group) or access to online map sources for groups



VOCABULARY

adaptation	descendent	fossil	Homo sapiens
ancestor	evolution	genes/genetics	indigenous
the Dark Continent	extinct	hominin	migrate

Procedures

1

PART I

The Search for Human Origins (30 minutes)

- 1 Have students engage in a think-pair-share in response to the question: “Where did the first humans live?” As a class, discuss their ideas about where the earliest humans lived, especially from a geographic standpoint.

- 2 Tell students that they will look into this question further by reading the article “Finding Lucy: The Leakeys and the Search for Human Origins”: <https://newsela.com/read/BHP-U6-3-lucy-leakey/id/3759>. Explain that they will “begin at the end.” Together, read the final paragraph of the article, emphasizing the ideas that “humankind began in Africa” and “few others could think it.” Individually or in pairs, have students read the article from the beginning, and instruct them to annotate the text in the following ways (post these instructions on the board):
 - Underline all evidence that humankind began in Africa.
 - Circle all reasons why few scientists could imagine this possibility until the Leakeys’ discoveries.
 - In the margins, record thoughts and questions that come up for you as you read.

- 3 Discuss the article as a class, using some of the following questions:
 - What did you find to be the strongest evidence that humankind began in Africa?
 - Why were early scientists convinced that *Homo sapiens* evolved in Europe? Why did they not consider Africa?
 - Why was Africa once referred to as the “Dark Continent”?
 - Why did the archaeologist Louis Leakey choose Olduvai Gorge in Tanzania as his main area of research?

NOTE

Articles on the Newsela website are available at different text levels and lengths. The link provided is to text level 5/800L, but you can choose the level or levels that are most appropriate for your students.

NOTE

According to the article “Why Was Africa Called the Dark Continent?”: “The most common answer...is that Europe did not know much about Africa until the 19th century. But that answer is misleading and disingenuous...They called Africa the Dark Continent because of the mysteries and the savagery they expected to find in the interior.” See more at <https://www.thought-co.com/why-africa-called-the-dark-continent-43310>.

- Why was the discovery of “Lucy” so important? What did it teach us about human evolution?
- What is the legacy of Louis and Mary Leakey? What did they teach us about our ancestors?

PART II

Tracking the Routes of Human Migration (30 minutes)

IMPORTANT NOTE ABOUT THIS LESSON

Early study of our human origins yielded two main theories. The multi-regional hypothesis held that some species of early humans populated the globe and modern humans evolved from them in different regions. The out-of-Africa theory postulated that modern humans evolved in Africa before dispersing to other parts of the world. Advances in genetic analysis beginning in the 1980s have provided support for the out-of-Africa theory, and scientists today largely agree that *Homo sapiens* evolved in Africa about 200,000 years ago. There is not uniform agreement, however, on the exact time periods and routes our ancestors took as they migrated across the world. Technological advances in archaeology and DNA analysis are constantly changing our understanding, and the discovery of new fossils and genetic evidence often challenges long-held theories. With each advancement, scientists are filling in the gaps in our understanding of human migration, yet the story keeps changing.

The migration routes used in this activity reflect a small sampling of the evidence and theories advanced by archaeologists, paleontologists, and other experts. However, they are not definitive. We have qualified all possible routes with phrases such as “may have...” and “could have...,” so students understand our knowledge of human migration is uncertain. Sources are included so students and teachers can dig deeper into theories and evidence. As students work through this activity, we encourage them to embrace the contradictions and uncertainties just as actual scientists do. However, they can be certain about the activity’s underlying premise—that humanity evolved from one place and that people from the far reaches of the world have many more similarities than differences.

- 4 Pose the question: “If humankind began in Africa, when and how did people get to other continents?” Allow students to share prior knowledge. Tell them they will participate in a mapping exercise and travel back in time 200,000 years to learn more about human migration.

5 Distribute the *Map of Human Migration* handout to each student. Review the cardinal directions and have students add a compass to their map. Together, review and identify the continents and oceans.

6 Check for chronological understanding. This activity will explore human activity going back 200,000 years. To contextualize, create a brief timeline on the board with 'today' as the reference point. Include data such as:

- Students' birth year
- Invention of the World Wide Web (1990)
- New Jersey becomes a state (1787)
- One of the first known groups of enslaved Africans brought to America (1619).
- Ancestors of humans evolve (one million years ago)

7 Divide students into small groups and distribute copies of one of the *Connect the Dots* handouts to each group. Have them follow the prompts to track on their maps the migration route of early humans to their assigned region. Students will need access to an atlas or online map sources in order to complete this activity.

8 When groups have finished, have them post their maps in a place that is visible to all. Allow students to circulate and view maps from different regions. Alternatively, share some of the different maps using a document camera. Conclude with a discussion using some of the following questions:

- Were you surprised by any of the migration patterns or cultural information? Explain why.
- What factors might have caused our early ancestors to migrate? What physical adaptations would have supported this migration?
- Why is it important to recognize that all of humanity originated in Africa? Why does this matter?

NOTE

Questions about color and race may arise, regarding why people look different if they all come from Africa. These questions should be directly addressed in a factual way (e.g. climate, geographic location and environmental conditions impacted human physical characteristics over time). Emphasize that color is "skin deep," and that all human beings are 99.9 percent identical in their genetic makeup. See the Smithsonian article "Modern Human Diversity–Skin Color" for more information: <http://humanorigins.si.edu/evidence/genetics/human-skin-color-variation/modern-human-diversity-skin-color>.

Discussion Questions

- 1 What forms of evidence have scientists gathered that proves humankind emerged in Africa?
- 2 When and how did early humans populate the rest of the Earth?
- 3 How has cultural bias and racism influenced scientists' beliefs about the origins of humanity?
- 4 Does the fact that all human beings come from Africa (and are very genetically similar) support or contradict ideas about racial categories that you have learned? Explain.
- 5 Why does it matter in today's world that we all descended from African ancestors?

ADDITIONAL RESOURCES

- + 23 and Me and Khan Academy. "Human Prehistory 101 (Parts 1 and 2)," YouTube video, 5:34/3:24, April 17, 2012, https://www.youtube.com/watch?v=8183HPmA2_I, <https://www.youtube.com/watch?v=T-9Nw66RCMhg>.
- + Australian National University. "Study finds most likely route of first humans into Australia." October 31, 2018. <https://www.anu.edu.au/news/all-news/study-finds-most-likely-route-of-first-humans-into-australia>.
- + Bae, Christopher. "In to Asia." *Aeon*, March 29, 2018. <https://aeon.co/essays/new-evidence-about-the-human-occupation-of-asia-is-cascading-in>.
- + California Academy of Science. Human Odyssey Interactive Map, <https://legacy.calacademy.org/human-odyssey/map>.
- + Cummings, Judy Dodge. *Human Migration—Investigate the Global Journey of Humankind*. White River Junction, Vermont: Nomad Press, 2016.
- + Gugliotta, Guy. "The Great Human Migration." *Smithsonian Magazine*, July 2008. <https://www.smithsonianmag.com/history/the-great-human-migration-13561>.
- + National Geographic. "Around the World in Seven Years," YouTube video, 2:40, November 18, 2013, <https://www.youtube.com/watch?v=Y1etsn0tjsE>. Journalist Paul Salopek retraces ancient migration out of Africa and around the world... on foot!
- + Thimmesh, Catherine. *Lucy Long Ago: Uncovering the Mystery of Where We Came From*. Boston, MA: Houghton Mifflin Harcourt, 2009.
- + Wow in the World—Where Did We Come From? NPR. Podcast audio. August 31, 2017. <https://www.npr.org/2017/10/17/547337520/where-did-we-come-from>.
- + Zimmer, Carl. "Crossing From Asia, the First Americans Rushed Into the Unknown." *New York Times*, November 8, 2018. <https://www.nytimes.com/2018/11/08/science/prehistoric-migration-americas.html>.