

## Answer Page to Questions and Activities

### Self Check Questions

1. d. "Correct! Walking upright was our ancient ancestors first big move toward becoming human"

If selected response is "a" then say "Early hominids had cranial capacities no larger than chimpanzees. Are you sure you want this as your final answer?"

If "b" then say "Tool use is not evident for at least another million years. Try again."

If "c" then say "Sorry, try again."

2. a. "Correct! Even Darwin figured this one out before virtually any human fossil evidence had been found." If selected response is b, c, or d say "Fossil evidence indicates that the most ancient hominid species existed in Africa. It is here that modern day humans and modern day chimpanzees share a common ancestor and our earliest human ancestors emerged."

### ACTIVITIES

**Part 1:** Matching Images from envelope #1 with descriptions, by category

Chimpanzee 1= skull (P), 2= ribcage (O), 3= arms (I), 4= hips (N), 5= legs (G), 6= feet (D)  
(Notice that the series of letters can spell the word "PONGID". This will help you see if the student has placed all parts properly on the chimpanzee outline on the reconstruction page.)

Human 1= skull (L), 2= ribcage (A), 3= arms (K), 4= hips (E), 5= legs (R), 6= feet (W)  
(notice that the series of letters can spell the word "WALKER". This will help you see if the student has placed all parts properly on the human outline on the reconstruction page. In part 3 the afarensis overlays can spell out "IM LUCY")

You can quickly inspect each team's plastic anatomy strips on the Reconstructions page for accurate placement by noticing a collection of letters when assembled that should spell "PONGID" on the left side next to the chimpanzee reconstruction, and "WALKER" on the right side of the human reconstruction. Notice that a single letter has been typed on each anatomical feature for this coding purpose. Check the student for placing *in proper order* each of the pieces by peeling them away or lifting them up carefully, one at a time. Notice that the order should be (if students followed directions and hints), from top down:  
Human reconstruction: feet (W), legs (R), hips (E), arms (K), ribs (A), skull (L) (notice "WALKER")  
Chimp reconstruction: feet (D), legs (G), hips (N), arms (I), ribs (O), skull (P) (notice "PONGID")

3. a., d., and e. are all incorrect, and are the proper choices. For any other choices indicate "Oops. You missed that one. Please review your clues and try again."

### Part 2:

- #4. D [could this be evidence of pronounced sexual dimorphism in which males are much larger than females? Remember too, that 2 individuals stepped into the ash forming the trackway on the right]  
#5. B [toe PRINTS aren't the toes themselves, so not directly observed]  
#6. D [no tools are associated with the site, and in fact none are associated with any australopithecine sites]  
#7. C [there is no evidence of placement of the hands on the ground as each individual moved forward]  
#8. B [to achieve this stance and walking gait, these individuals likely possessed humanlike anatomy]  
#9. B [lower legs would very likely have to be close together to produce tracks in this in-line fashion]  
#10. D [though we now know australopithecines to possess tiny, ape sized brains, this fossil trackway gives no hint of cranial capacity]  
#11. A [you can see evidence for this, though it does appear that the right hand trackway is somewhat distorted by 2 individuals having stepped in the same place]  
#12. D or C [a case might be made for the tracks being created at the same time. After all they are matched stride for stride. However, this could have been done at separate times, perhaps a few hours or days apart, depending on how much ash was accumulating from volcanic eruptions. Recent studies and measurements indicate that the left and right track sets couldn't have been made at the same time because the individuals would have been too close together to even successfully walk.]  
#13. A [this is a case in which you can say "directly observed."]

### Part 3:

You will want to inspect the plastic overlays to be sure that they are in the required order, and not just quickly laid down in any order. Lift each piece up one at a time. The six pieces together can spell out "IM LUCY." They should be in the following order from top to bottom: ribs (U), pelvis (L), arms (Y), feet (M), skull (C), legs (I)

#14. if b. say "Correct."; if a or c say "Remember 'different traits at different rates'

**Part 4:**

#15. If a. say "Correct.";

If b. say "Evolution rarely ever produces a complete or perfect set of adaptations. Evolution tinkers with existing structures through mutation and selection to produce merely that which 'works.'"

If c. say "you may want to review the anatomy strips to see some of the differences in anatomy that permit upright walking."