WHAT, IF ANYTHING, IS A ZEBRA?

An Essay by Stephen Jay Gould (Paleontologist) in Hen's Teeth and Horse's Toes, 1994.

Read the article, and answer the following questions (on this sheet, in ink), based on the article. Be sure to ask any questions which occur to you as you read (e.g. meanings of certain words, etc.) on back of this sheet.

1. How are rabbits and rodents related?

A) rabbits are rodents

B) rabbits are closely related to rodents

C) rabbits are not closely related to rodents

D) rabbits are not related to rodents at all

1. If animals were classified according to brain size, humans and dolphins would be classified as "\_\_\_\_\_\_\_\_".
2. Why?
3. Why aren't they?
4. Why aren't children with Down's Syndrome considered to be more closely related to each other (due to many striking similarities) than to their parents?
5. How many living species of zebras are there?\_\_\_\_\_\_ What are their common names?
6. The genus Equus includes zebras, \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_
7. What is "Cladistics"?
8. What is a clade?
9. What are "sister groups"?
10. What is OUR sister group?
11. What is a "cladogram"?
12. Why are orangutans, chimps, and gorillas (the "Great Apes") not a true genealogical unit?
13. What are "shared derived characters"?
14. What are "primitive characters"?
15. What are the clearest shared derived characters which chimps and gorillas share?
16. What does Bennett base her cladistic analysis of Equus on?
17. According to Bennett, are zebras a genealogical unit?\_\_\_\_\_\_Why?
18. According to chromosome analysis, are zebras a genealogical group?\_\_\_\_\_\_Why?
19. Why is there "no such thing as a fish"?
20. What is "phenetics"?
21. Why do phenetics and cladistics sometimes fail to produce identical lineages?