

Name \_\_\_\_\_

Period \_\_\_\_\_

AP Biology

Date \_\_\_\_\_

**RAVEN CHAPTER 25 GUIDED NOTES: SYSTEMATICS AND  
THE PHYLOGENETIC REVOLUTION**

1. Briefly explain the binomial nomenclature system developed by Carolus Linnaeus

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2. What is taxonomy?

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3. What is a taxon? Give an example.

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4. List the eight levels of taxonomic categories in order from most inclusive to most specific.

1. _____	5. _____
2. _____	6. _____
3. _____	7. _____
4. _____	8. _____

5. What is systematics?

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6. What is a phylogeny?

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7. Why is similarity in appearance and structure not a sound way of building accurate family trees.

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8. What is cladistics?

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9. What is a cladogram?

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10. What is the difference between ancestral and derived characteristics??

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11. Why is an outgroup necessary for building a cladogram?

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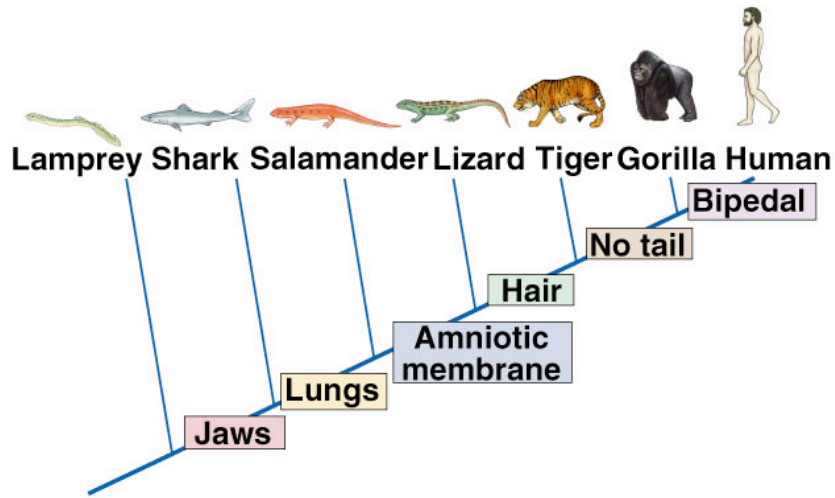
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12. What is a clade?

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13. Explain how the chart below was used to build the cladogram that follows.

Traits: Organism	Jaws	Lungs	Amniotic membrane	Hair	No tail	Bipedal
Lamprey	0	0	0	0	0	0
Shark	1	0	0	0	0	0
Salamander	1	1	0	0	0	0
Lizard	1	1	1	0	0	0
Tiger	1	1	1	1	0	0
Gorilla	1	1	1	1	1	0
Human	1	1	1	1	1	1




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14. What is the principle of parsimony and how is it used to help build cladograms?

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15. Distinguish between the following terms:

a. monophyletic: \_\_\_\_\_

\_\_\_\_\_

b. paraphyletic: \_\_\_\_\_

\_\_\_\_\_

c. polyphyletic: \_\_\_\_\_

\_\_\_\_\_

16. What was the main points of this illustration?

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\_\_\_\_\_

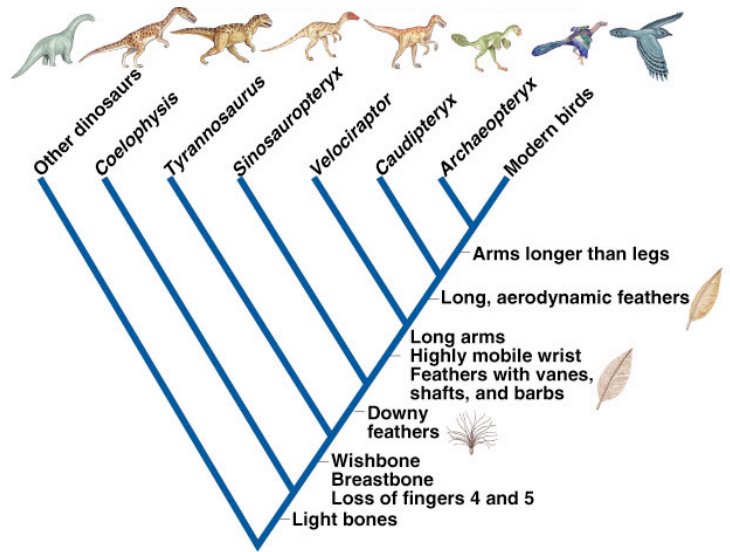
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17. List the three domains in the classification of living organisms and briefly describe them.

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

\_\_\_\_\_

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

\_\_\_\_\_

c. \_\_\_\_\_

\_\_\_\_\_

18. List the six kingdoms in the classification of living organisms and briefly describe them.

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

4. \_\_\_\_\_

\_\_\_\_\_

5. \_\_\_\_\_

\_\_\_\_\_

6. \_\_\_\_\_

\_\_\_\_\_

19. What is the issue with fitting viruses into this classification system?

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20. What is the problem with the kingdom Protista?

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