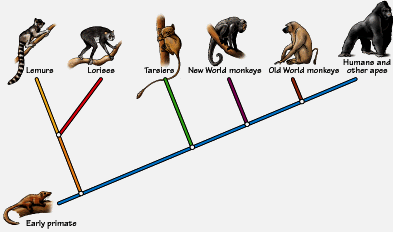
**Evolution Study Guide 2**

**“Evidence for Evolution”**

1. **What are 4 major topics for evidence for evolution?**
2. **How old is life on Earth estimated to be?**
3. **Is the fossil record a complete guide to the history of life? If not why?**
4. **What 3 things does the fossil record tell us?**
5. **What is carbon dating and how can we use it to determine age of things millions of years old?**
6. **What is plate tectonic theory?**
7. **What is biogeography?**
8. **What is the “Wallace’s line”?**
9. **What is adaptive radiation and how can it be used to explain the differences in equestrian (horse) evolution?**
10. **What are homologous structures? Are they from direct ancestral relationships?**
11. **What are vestigial structures?**
12. **What are analogous structures? Are they from direct ancestral relationships?**
13. **What is the difference between convergent and divergent evolution?**
14. **What is embryology?**
15. **What do homeotic genes control?**
16. **What is phylogenetics?**
17. **Who is the closest living ancestor to humans and other apes based off the phylogenetic tree below?**

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1. **How can phylogenetics base relatedness from amino acid or DNA sequences?**
2. **What is artificial selection?**
3. **What are some unintending consequences from artificial selection?**
4. **Draw the graphs for the three types of selection below and explain how allelic frequency has changed?**

**Stabilizing Disruptive Directional**