Evolution Notes

1. Species –

* Why are mules and ligers not new species?

1. Variation –
2. Many are determined by our genetics

* When are mutations most likely to be beneficial?

1. Adaptation –
2. Types of adaptations:
3. Structural –
4. Protective coloration –
5. Mimicry –
6. Behavior –
7. Migration
8. Hibernation –

Example: Camel –

1. Evolution –
2. Explanations for Earth’s Biodiversity
3. Charles Bonnet –
4. Jean Baptist Lamarck –

Ex. –

1. Charles Darwin –
2. Natural Selection

3. Rate of Evolution

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| 1. Gradualism – |  |
| 1. Punctuated equilibrium – |  |

1. Evidence for Evolution
2. Fossil Records –
3. Anatomy
4. Homologous structures -

Ex. -

1. Vestigial structures –

Ex. –

1. Analogous structures –

Ex. –

1. Embryology –

Ex. –

1. Biochemistry –
2. Why is evolution so controversial?
3. Speciation –
4. Evolution Processes
5. Divergent evolution –
6. Causes:



1. Example –
2. Convergent evolution –
3. Cause –
4. Example –
5. Coevolution –
6. Cause –
7. Example –
8. Adaptive radiation –
9. Example –
10. Population genetics –
11. Gene pool –
12. Allele frequencies –
13. Genetic equilibrium –
14. Hardy-Weinberg principle –



1. Genetic drift -
2. Distribution curves
3. Normal distribution –
4. Directional selection –
5. Disruptive selection –
6. Why does evolution matter now?