**Vertebrate Developmental Trends Assignment**

1. Which is considered to be a transitional group between aquatic and terrestrial animals?

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1. In which class do we see the appearance of bone for the first time?

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1. Which class of fish has a covering over the gills? Name this structure.

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1. In which class do we see the appearance of lungs for the first time? Why is this a necessary adaptation?

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1. The difference in the vertebrate circulatory systems comes down to the number of chambers.
2. Which is the most efficient heart? Explain you answer.

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1. Which is the least efficient heart? Explain your answer.

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1. Where do we see the appearance of a three chamber heart for the first time?

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1. Where do we see the appearance of a four chamber heart for the first time?

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1. In which class do we see the appearance if internal fertilization for the first time? Why do we see the change from external to internal at this point?

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1. Which is the only class to have internal development?

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| 1. **Compare the evolutionary trends of the circulation system for vertebrates. Explain why these adaptations are successful for these groups.**
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| 1. Class Agnatha, Chondrichthyes, Osteichthyes
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| 1. Class Amphibia, Reptilia
 |
| 1. Class Aves, Mammalia
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| 1. **Compare the evolutionary trends of the fertilization and development for vertebrates. Explain why these adaptations are successful for these groups.**
 |
| 1. Class Agnatha, Chondrichthyes, Osteichthyes, Amphibia
 |
| 1. Class Reptilia, Aves
 |
| 1. Class Mammalia
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| 1. **Compare the evolutionary trends of the respiratory for vertebrates. Explain why these adaptations are successful for these groups.**
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| 1. Class Agnatha, Chondrichthyes, Osteichthyes
 |
| 1. Class Amphibia,
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| 1. Class Reptilia, Aves, Mammalia
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