**Evidence of Evolution**

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**Much evidence has been found to indicate that living things have evolved or changed gradually over time.**

1. **Carefully examine the drawings of the bones to the right and look for similarities among the various animals. Color each part of the human arm a different color , then color the corresponding bone in each of the other animals the same color as the human bone.**
2. **How are these bones arranged in a similar way in each animal?**

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| --- | --- |
| **Animal** | **Function** |
| **Human (arm/hand)** |  |
| **Whale (fin)** |  |
| **Crocodile (arm/hand)**  |  |
| **Cat (arm/paw)** |  |
| **Bird (wing)** |  |
| **Bat (wing)** |  |

1. **Describe the function of each set of bones in the table below.**
2. **Structures that are formed in similar ways during development and share like arrangements but have different forms and functions are (circle one) ANALOGOUS/HOMOLOGOUS**

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1. **Examine the butterfly wing and the bird wing to the right.**

**What function do these structures share?**

1. **How do the two wings differ in structure?**
2. **Do birds and insects share any structural similarities that would suggest they are closely related to each other?**
3. **Some apparently unrelated animals have organs with similar functions, yet are very different in structure and form. These structures are called (circle one) ANALOGOUS/HOMOLOGOUs**

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1. **The cave fish and the minnow are related, but the cave fish is blind. Explain why eyesight is not an important adaptation to life in a cave.**
2. **Does the appearance of the cave fish and minnow suggest common ancestry? Why or why not?**
3. **Organs or structures that have lost their function in the organisms are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .**
4. **Read the list of human vestigial structures in the table and suggest a possible function for each structure and explain why it became vestigial.**

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| --- | --- | --- |
| **Structure** | **Possible Function** | **Why Vestigial?** |
| **Appendix** |  |  |
| **Coccyx (tail bone)** |  |  |
| **Muscles that move ears** |  |  |
| **Muscles that make hair stand up** |  |  |
| **Little Toe** |  |  |
| **Wisdom Teeth** |  |  |

**Analysis Questions:**

1. **Explain why homologous structures are evidence of evolutionary relationships.**
2. **Explain the evolutionary relationship between the fin of a fish and the flipper of a whale.**
3. **List 2 structures (not from the table above) that you think are vestigial and explain why.**