***Skeletal variation amongst vertebrates***

(adapted from *Science Aspects 2* activity, ‘Signs in the Skeletons’)

***Purpose***

To compare different vertebrate skeletons and their

adaptations.

***Requirements***

Skeletons of human, cat, bird, frog, bony fish, lizard.

***Procedure***

1. Copy the table ‘Vertebrate skeletons’ into your notes. Walk around to the various specimens and carefully observe them. Complete the table by placing a tick if the feature is present.
2. Copy the table ‘Comparisons of similarities in vertebrate skeletons’ and complete it. Write in the animals that are most alike and least alike for each of the features.

***Comparison of similarities in vertebrate skeletons***

|  |  |  |
| --- | --- | --- |
| Feature | Most Alike | Least Alike |
| *Skull* |  |  |
| *Vertebral column* |  |  |
| *Ribs* |  |  |
| *Front limbs* |  |  |
| *Rear limbs* |  |  |
| *Front limb girdle* |  |  |
| *Read limb girdle* |  |  |

***Vertebrate skeletons***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Animal | Skull | Vertebral Column | Ribs | Front limbs | Rear limbs | Front limb girdle | Rear limb girdle |
| *Human* |  |  |  |  |  |  |  |
| *Cat* |  |  |  |  |  |  |  |
| *Bird* |  |  |  |  |  |  |  |
| *Frog* |  |  |  |  |  |  |  |
| *Fish* |  |  |  |  |  |  |  |
| *Lizard* |  |  |  |  |  |  |  |

***Questions***

1. Using the table *‘Comparisons of similarities in vertebrate skeletons’*, which two animal skeletons seem to be most alike? Which are least alike?
2. Considering the way these animals live, describe skeletal adaptations for each animal, which aids its survival.
3. These animals have remarkably similar skeletons. Many bones are similarly located and have and share functions. Give some examples of this.
4. What reasons can you think of to explain how these animals have skeletons which are so similar?