

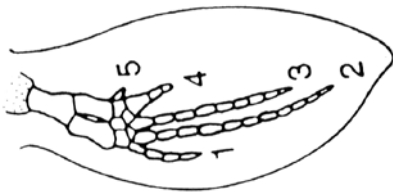
# Evolution and Adaptations

## Activity A: Pentadactyl Limb

Go to the *Skeletons* exhibition on the ground floor.

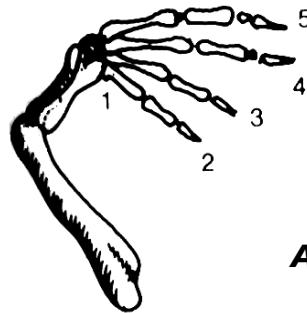
1. Scientists suggest that similarities in the arrangements of the bones in the limb provide further evidence for evolution. Study the skeletons in the exhibition and name the animal that each of the following limbs belongs to and suggest the limb's function. (That is, what is the limb adapted for?)

(Choose from: human, frog, horse, whale, bird or bat)



**Animal:** \_\_\_\_\_

**Function:** \_\_\_\_\_



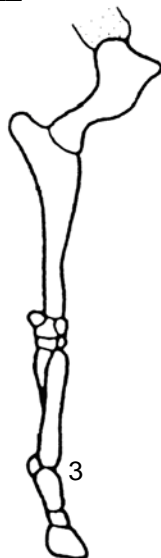
**Animal:** \_\_\_\_\_

**Function:** \_\_\_\_\_



**Animal:** \_\_\_\_\_

**Function:** \_\_\_\_\_

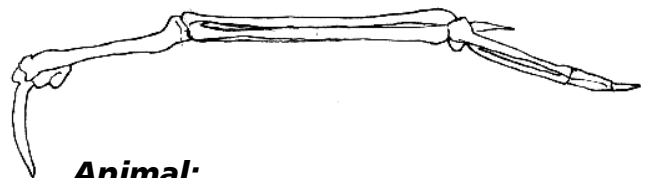
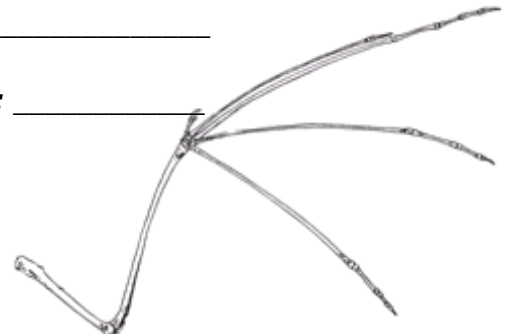


**Animal:** \_\_\_\_\_

**Function:** \_\_\_\_\_

**Animal:** \_\_\_\_\_

**Function:** \_\_\_\_\_



**Animal:** \_\_\_\_\_

**Function:** \_\_\_\_\_

**Adaptation** – the ways in which an organism can survive in an environment

2. Look closely at the bird and bat limb which are both adapted for flying. How are their limbs different but still adapted for flight?

## Activity B: Adaptations in Birds

Go to the ***Birds and Insects*** exhibition on **Level 2**. Look at the birds in the display cases located around the outer walls of this exhibition.



**1. Birds have other adaptations to their habitats, particularly their bills and feet.**

Walk around the exhibition and look at the birds. Choose **one** you like and draw it in the box below. Make sure you draw its bill and feet.

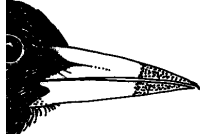









Name of bird: \_\_\_\_\_

**2. Look at the bill and feet more closely and suggest:**

- **Where you think the bird lives (its habitat)** \_\_\_\_\_
- **What types of food the bird eats** \_\_\_\_\_
- **How the bird gets its food** \_\_\_\_\_

**3. Go to the 'Characteristics' display case just inside the exhibition entrance on the left. Look at the information about bird bills and draw a diagram (side view) of the four main types of bills in the appropriate part of Table 1 below. An example of each type has been provided. Find the name of another bird with the same type of bill. All other birds can be classed as having an 'all purpose' bill.**

About half of all birds have feet which are used for perching on branches. The rest can be divided into four main groups. Look at the information about birds' feet and complete Table 2. Provide another example to the one which has been given to you.

Bird Bill Shapes – Table 1		Bird Feet Shapes – Table 2	
Bill Function	Diagram	Feet Function	Diagram
All purpose eg. Golden Whistler	 eg.	Perching or songbirds eg. Eastern Rosella	 eg.
Tearing flesh eg. Grey Goshawk	 eg.	Walking on floating vegetation eg. Jacana	 eg.
Picking food out of mud eg. Japanese Snipe	 eg.	Grasping and killing prey eg. Wedge-Tailed Eagle	 eg.
Strain small organisms from water eg. Pink-eared duck	 eg.	Running eg. Emu	 eg.
Cracking seeds eg. Gouldian Finch	 eg.	Swimming eg. Black Cormorant	 eg.

**4. Now that you know more about birds' bills and feet, check whether you still agree with your responses to question 2. Correct your answer if necessary.**

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**5. Write one interesting fact about birds you didn't already know!**

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# Activity C: What is Archaeopteryx?

Go to the ***Dinosaurs*** exhibition on **Level 2**.

1. Look at the display case 'Bird or dinosaur' to the right of the entrance near the end of the gallery. Fill in the missing words below.

*Archaeopteryx* is considered a transitional (link), species with more in common with dinosaurs than birds. The presence of \_\_\_\_\_ links it with birds while its reptilian features include \_\_\_\_\_ and \_\_\_\_\_.

2. Draw a diagram of the *Archaeopteryx* model in the box below. Label one bird-like feature and one reptilian feature on your diagram.



## Summary

Describe how studying adaptations can provide evidence for evolution.

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