

## ANATOMY OF A BAT INFORMATION SHEET

### HEAD OF A BAT

#### EAR

Bats hear well, and their ears come in many different shapes. Large ears help bats have extra-sensitive hearing. Some bats with very large ears can hear even the faint sounds of a cricket walking on sand.

#### NOSE LEAF

Some bats have fleshy triangles on top of their noses. They are present only on bats that send out echolocation signals through their noses. They appear to be used to direct echolocation sounds towards particular targets.

#### TRAGUS

A small, sword-shaped piece of flesh inside the front of the ear. It is believed to be used in echolocation. Scientists are still studying its use.

#### EYE

Bat eyes are sometimes small, but all bats can see well; none are blind.

### BODY OF A BAT

#### FUR

Bats' fur comes in many colors and patterns: black, brown, silver, orange, spotted, or striped. Their fur can be short and dense, or long and fluffy. Some bats have hair on their tail membranes and wrap themselves up to stay warm.

#### LEG

Bat legs are thin and have weak muscles because bats don't need to walk much.

#### TAIL

Bat tails can be long or short. Some bats don't have tails at all. The tail helps a bat to shape its tail membrane for slowing down or turning in flight.

#### KNEE

Bat knees point backwards (compared to ours) so that they can grip the surface where they are roosting.

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### TAIL MEMBRANE

The tail membrane is the skin between the legs, and it can be wide or narrow. It is used like a rudder or brakes to steer or slow the bat as it flies. Some bats even use their tail membrane to help catch insects in the air.

### TOES

Bat toes have sharp, curved claws that grip even when bats sleep. As a bat hangs upside down, the weight of its body pulls on tendons in the ankle and feet, causing them to automatically hook onto a surface. This way, a bat can hang on without getting tired. This is similar to a horse's legs locking as it sleeps standing up.

### CALCAR

A small spur of bone or cartilage that sticks out from the ankle. It is used to control the tail membrane while flying.

### HAND WINGS

Bat bones (especially their upper arm, forearm, and elbow) are much lighter than ours but look similar. Bats have a thumb and four fingers that are like human fingers but much longer and narrower. They use their thumbs to grab roost surfaces or to grab tree branches with flowers or fruit. The fingers help to change the shape of the wing so bats can change their direction of flight or even grab a flying insect.

### FOREARM

Bats have large, strong arm muscles that are used to move their wings.

### THIRD FINGER

The long bone extending to the tip of the wing.

### ELBOW

Bat elbows work very much like our own.

### FOURTH FINGER

The long bone extending along the width of the wing.

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**THUMB**

A bat thumb points forward and has a claw.

**FIFTH FINGER**

The long bone extending parallel to the body.

**SECOND FINGER**

The long bone on the outside edge of the wing.

**WING MEMBRANE**

A tough, elastic, double skin between a bat's body, tail, arm, and fingers which makes up the wing.