

Name:

Class:

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A. Read this account by Maurice Burton. It is from the Oxford Children's Reference Library, Vol. 3: Animals.

Bats

Bats are the only mammals that truly fly. Others such as the flying squirrels and flying phalangers, glide rather than fly. A bat is able to fly because its very long finger-bones have a web of skin stretched across them, and its powerful shoulder muscles can beat these 'wings'. Bats are found throughout the world. One group lives mainly on insects and the other on fruit.

A typical bat is the pipistrelle. It has a wingspan of 8 ½ inches, and is covered with silky fur, reddish brown above and paler below. It has a broad head, a blunt muzzle, and triangular ears. Pipistrelles are active from dusk to just before sunrise, then they retire to sleep, either alone or many together, in crevices or in roofs, behind pipes or gutters, or in hollow trees. When they sleep, they hang head downwards from the long curved claws of their hind feet, and they also use these claws to groom their fur. They feed on flies, gnats, and small beetles which they catch in the air.

Pipistrelles and all night-flying insect-eating bats have small, weak eyes, and they catch their food and avoid flying into things by what we call 'echolocation'. If you stand in front of a blank wall or near a hill and shout, the sound waves of your call hit the wall or hill and come back to your ears as an echo. The nearer you are, the more quickly the echo comes back. Ships' captains used to use this method to find their way in the dark among icebergs or cliffs. They sounded their siren and could tell, by the time the echo took to come back, how near they were to a cliff or iceberg.

The bat squeaks while it is flying, but its squeaks are ultrasonic, that is, so high-pitched that the human ear cannot hear them. The echoes of its squeaks give the bat a kind of sound-picture of everything that is round it. Bats have ears especially adapted for finding their way by hearing. There is a muscle which closes the ear when the bat squeaks, but opens it in time to receive the echo. Also, inside the ear is an earlet just beside the earhole which probably helps in direction-finding.

Bats have babies once a year. When the baby bat is born, blind and naked, the mother first puts it in a pouch made by bending her tail forwards. Then she places it on her chest where it hangs, clinging on to her fur with its claws. It stays there for about two weeks while she flies about. Then, when it is bigger, she hangs it by its feet in some safe place while she flies off to find food. When she returns, she replaces it on her

chest. In about three months, the young bat begins to fly.

Answer the following questions briefly.

- a. What do you think the author means by saying, 'Bats are the only mammals that *truly* fly'?

- b. Do bats have wings? How do they fly?

- c. What does echolocation mean?

- d. What does the author mean by saying, 'Inside the ear is an earlet just beside the earhole which probably helps in direction-finding'?

- e. What does the author mean when he says 'the baby bat is born naked'?

- f. What does 'ultrasonic' mean?

- g. Make a list of all the hyphenated words in the passage. E.g. finger bones

- h. Can you explain the difference between *all night-flying* and *all night flying*? Use the two expressions in sentences which show the difference in meaning.