

# 10 WHAT'S FOR DINNER?

**Objective:** To familiarize students with the variety of bat diets

**Grades:** K-3

**Type of Activity:** Mobile craft project

**Materials:**

- Copies of pages 39, 40, and 41
- Crayons or markers
- Glue
- Scissors
- Large embroidery needle (or hole puncher)
- Heavy-duty black thread
- Two plastic straws per student (or a coat hanger)

## Background Information

The nearly 1,000 different kinds of bats in the world eat a variety of food items. The diversity of diets is not only interesting, but what and how bats eat is vital to ecosystems as diverse as rain forests and deserts.

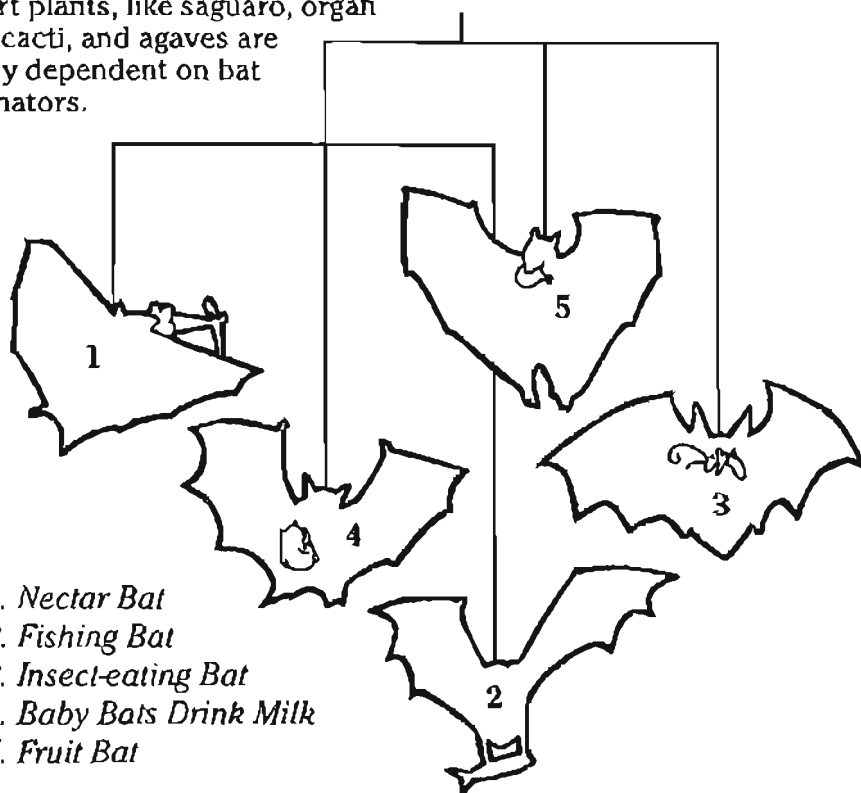
Give each child copies of pages 39, 40, and 41. After coloring the bats and food items, students cut them out and attach the food item nearest the bat as indicated by the mobile diagram. Glue the pieces together. Holes are then made with the needle, and thread is attached to each bat. The five bats with thread are tied to the straws as shown in the diagram and then adjusted so they balance. The following provides information for each kind of bat featured.

## Bats That Eat Nectar (nectarivory)

Throughout the world's tropics and subtropics, many kinds of bats feed on nectar and pollen and serve as pollinators for a variety of trees and shrubs. Bats are especially important in rain forests where their pollination activities help maintain the diversity of plant life. When a bat inserts its head into a flower to obtain nectar, its head and body become covered with pollen. As it moves among flowers, the pollen stuck to the bat's fur is transferred to flowers on other plants, effecting cross-pollination. Cross-pollination is essential to the plant's reproduction. Plants that depend primarily on bats open at dusk and produce nectar attractive to bats. Flower shapes are often just right to receive a nectar bat's head. Even tall desert plants, like saguaro, organ pipe cacti, and agaves are highly dependent on bat pollinators.

## Bats That Eat Fruit (frugivory)

Fruit bats are also extremely valuable to the maintenance and regeneration of tropical rain forests. These bats are attracted by the odors of ripe fruit, such as a fig. Picking a fruit with its mouth, a bat will fly off to eat its dinner. By discarding undigested seeds, bats help to distribute them to different parts of the forest. Some fruit bats eat up to two and a half times their body weight in food in a single night. Just one bat can deposit up to 60,000 seeds in a night. A small percentage of these will take root and grow into new trees. Fruit bats are also vital to forest regeneration in clear-cut areas, because they do not hesitate to cross clearings, dropping seeds as they fly. A high percentage of the woody plants that grow in cleared areas come from seeds dropped by bats.



***Bats That Eat Insects (insectivory)***


About 70% of bats are insectivorous. They are major predators of night-flying insects, including mosquitoes and crop pests such as corn borer and cutworm moths. Nursing mothers eat as much as their body weight in insects nightly. Bats chase insects using their echolocation (sonar). Insects may be caught directly in the mouth, can be deflected towards the mouth with the wings, or can be captured in the tail membrane. Where bats still exist in large numbers, they provide valuable insect control, chemical free and at no charge.

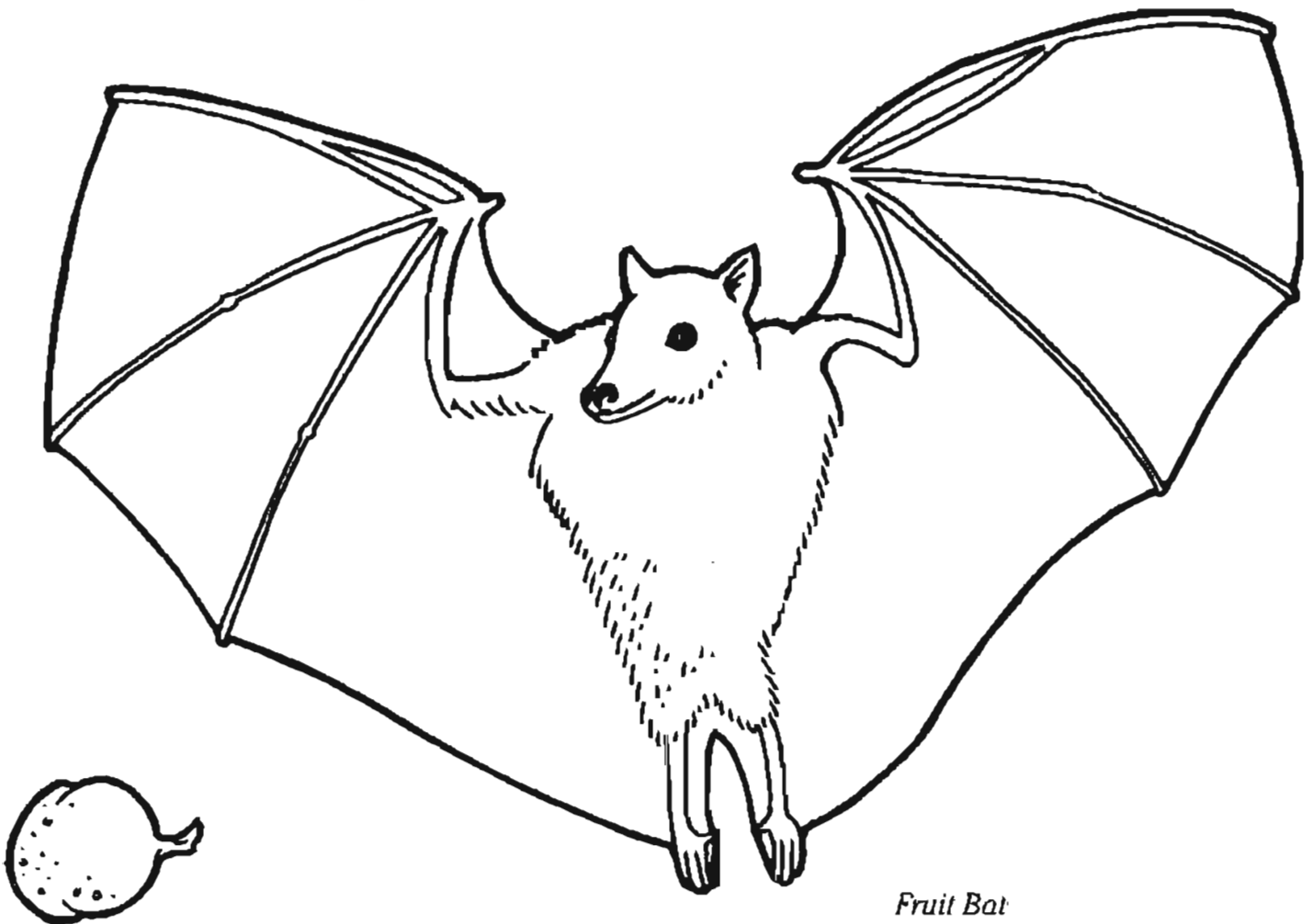
***Bats That Eat Fish (piscivory)***

Few people have heard of fishing bats. Most live in the Latin American tropics, where they fish over quiet streams and lagoons. Flying close to the water's surface, the bat uses its sonar to detect ripples and tiny exposed fins of minnows. Lowering its huge feet and gaff-like claws into the water, it grabs little fish out of the water. A single bat may eat 30 to 40 small fish in a night.

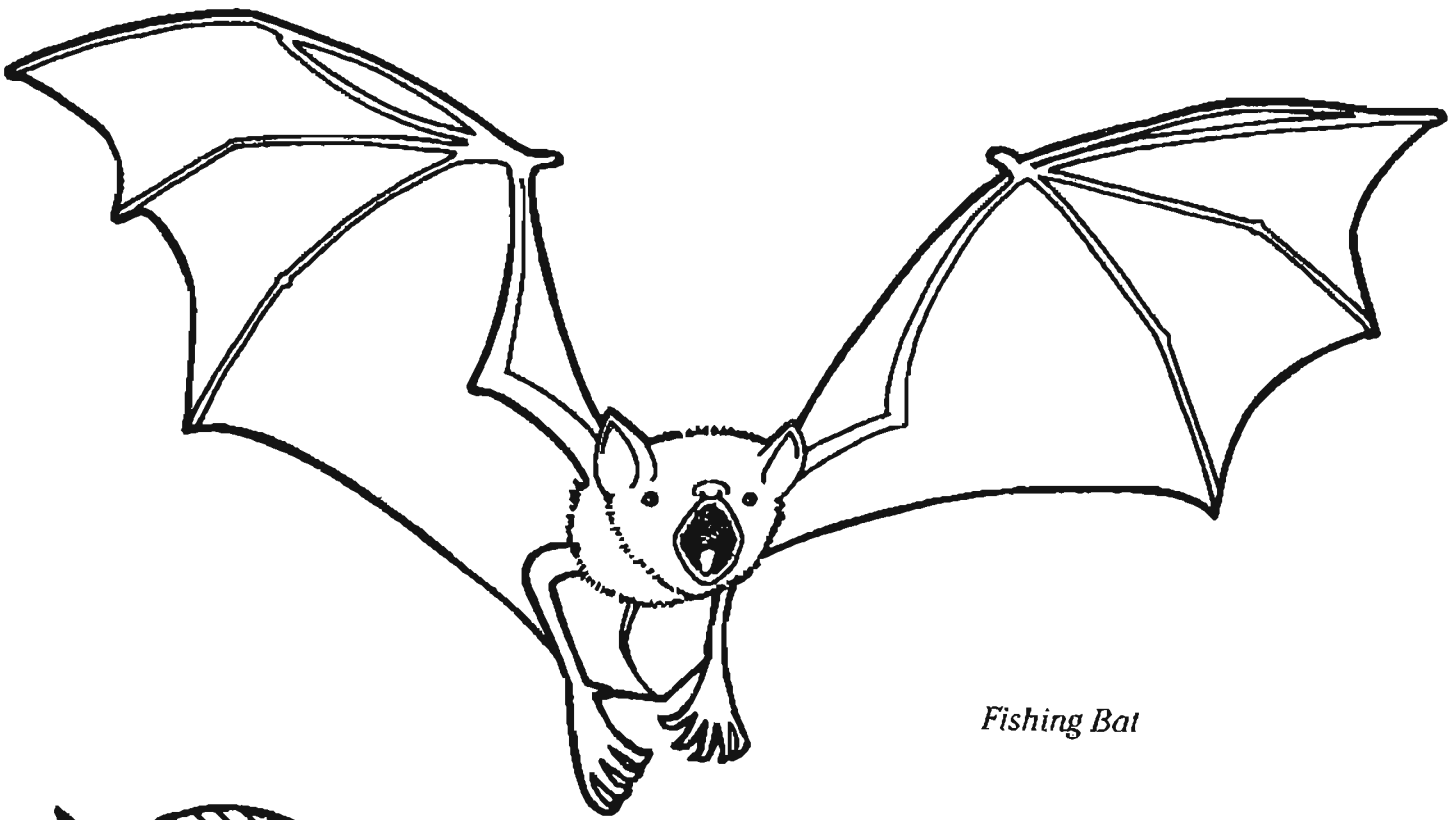
***Baby Bats Feed on Milk***

Being mammals, baby bats nurse from nipples located on

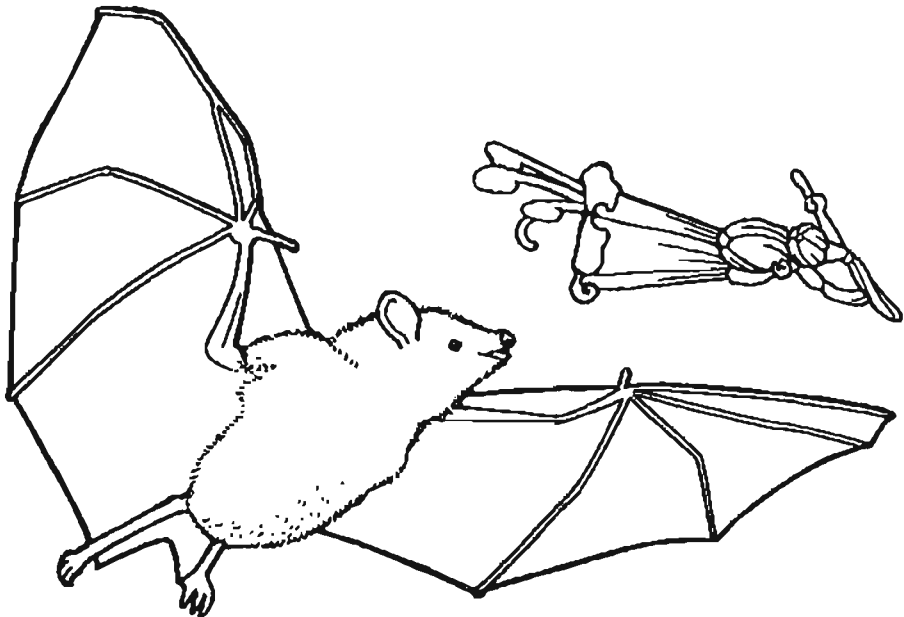
their mother's chest. Babies nurse for several weeks before they learn to fly and find food on their own. Mother's milk is extremely high in fat content. It is thought that only marine mammals have more fat. When necessary, babies can hitch a ride on mom as she flies. Baby bats have large feet that they use to cling onto the mother's fur, and milk teeth that attach to the nipple so they can hang on tight. As babies grow they become too heavy for moms to carry. Mothers return to nurse them several times a night. Most bats produce only one baby per year. 



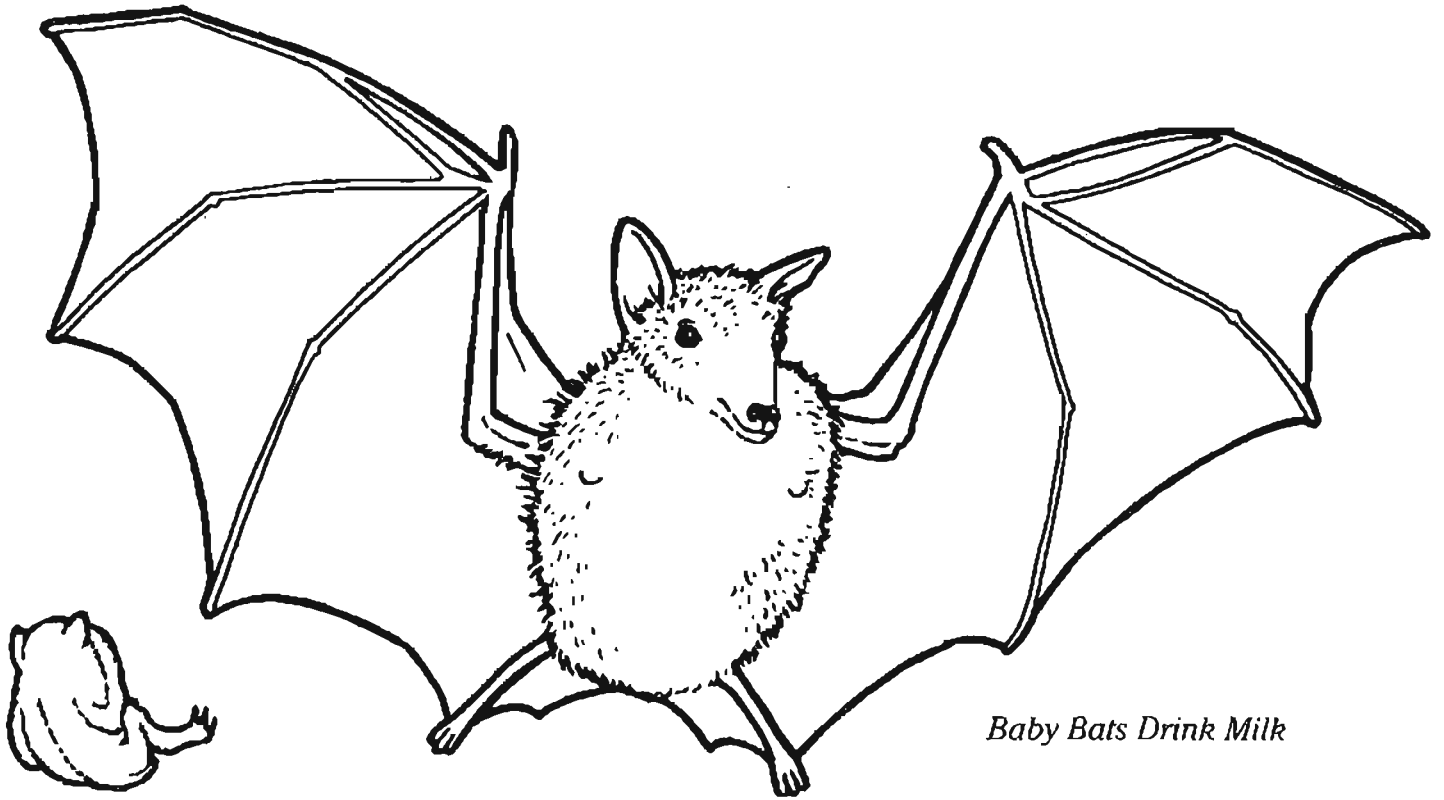
*Fruit Bat*



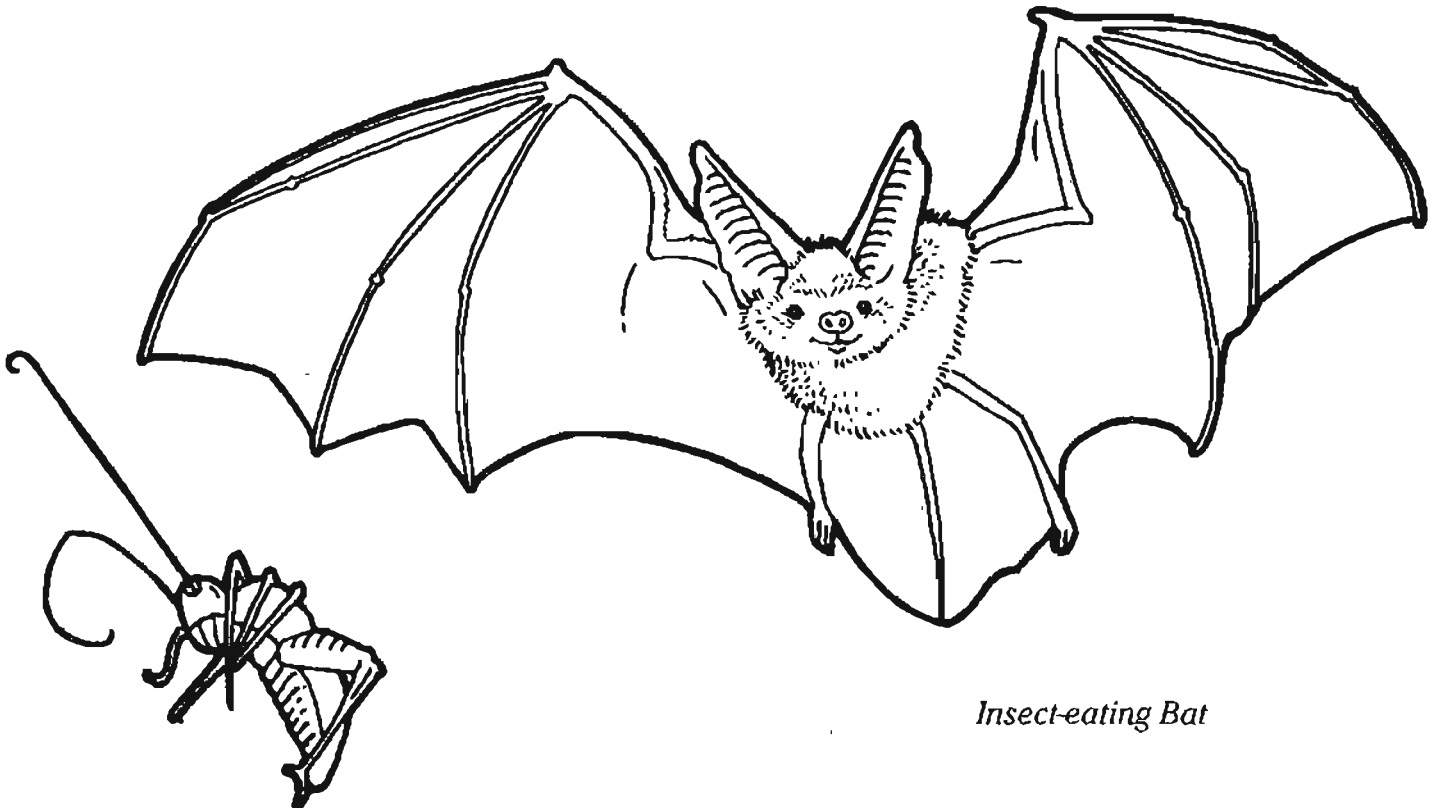
*Fishing Bat*



*Nectar Bat*



*Baby Bats Drink Milk*



*Insect-eating Bat*