

# HABITAT FOR BATS

Science and Engineering Education Center

The University of Texas at Dallas

## Challenge

There are 32 species of bats found in Texas. Some species may be found in your area. See if you can figure out some of them!

## Materials

My Local Bats Lab Sheet, Bat Range Maps 1-3

## Activity

1. **Review** the *range maps*. Mark where you live on the maps.
2. **Read** the about the *habitat preferences* for the common North American bat species from the table provided on the *My Local Bats Lab Sheet*.
3. **Use** the maps and the preferences table to determine which species may be found in your area. Discuss your hypothesis with others.
4. **Examine** the bat house closely. What about the bat house's design may be attractive to bats?

## Going Further

- Look around your neighborhood and see if you can determine what places might be ideal for bats.
- Build a bat house to attract bats to your yard.
- Plan a bat-watching outing using the Texas Parks and Wildlife Department *Bat-watching Sites of Texas* guide.

*All plants and animals have the same basic needs. A **habitat** is the place where an animal or plant lives and gets everything it needs to survive, including food, water, shelter and adequate space to live. If one or more of these necessary components are removed from a plant or animal's habitat, it will not survive.*

*Bats have very complex habitat needs. They use a variety of habitat types depending on the species of bat, the time of year, and what they are doing. In order to survive, **insectivorous** bats need insects to eat, water to drink, places to sleep and raise their young in the summer, and places to hibernate or roost in the winter. The place a bat goes to rest or sleep is called its **roost**. Bats need different roost conditions at different times of the year and they will often move around to find one or more roosts to meet their needs. Bats have summer roosts where they raise their young and winter roosts where they hibernate. Places where bats hunt for insects are called foraging habitats. Bats often travel between roosts and foraging habitats using trails, roads, or wooded streams and rivers.*

*Rivers, streams, ponds, and lakes are all used by bats because many species hunt for insects over water, and almost all need to drink daily. Some bats use caves or other natural cavities such as rock outcrops, cliff faces, or even exfoliating bark on trees to roost, hibernate, and raise their young. Bats can even be found in buildings! Farm buildings such as farmhouses, barns, and outbuildings of traditional wood, brick, or stone construction and/or with exposed wooden beams, are all places where bats might roost. This is especially true when these buildings are located near woods and/or water. Bats are also found in other human-made structures such as tunnels, mines, cellars, air raid shelters, bridges, and aqueducts. You just never know where you might find a bat!*

*You can download a PowerPoint presentation with photos of these habitat types at: <https://batslive.pwnet.org/edubat/curriculum.php>.*

*\*Bats hang upside down to better hide from predators.*



1. Use the "Range Maps for Common North American Bat Species Student Worksheet" and locate your town on each range map. Place an "X" on the location of your town.

2. Decide if each of the bat species might occur in your area by determining if the "X" that marks your town is inside the range of the bat. In the following table, draw a line through the bat species name and the additional information for all the species that do NOT have a range that includes your area.

3. For the remaining bat species, review the habitat types listed in the table. Are there any habitat types that you know do NOT occur where you live? If so, lightly cross these habitat types out. You will come back to these habitat types later in this activity, so make sure you can still read the information below your cross out.

4. Review the roost types listed for the remaining bat species. Are there any that do NOT occur where you live? If so, cross these bat roost types out lightly in your table.

5. Review the food types for the rest of the bat species. Are there any that do NOT occur where you live? If so, cross them out, too.

6. Look over your table. The bat species that have not been crossed out in your table are the common bats species that might be found in your area! Review each of these bat species to determine if the food, summer roost, winter roost, and habitat types for these species are all present in your town. Based on your findings, can you narrow down the list of bat species that might occur in your area?

SPECIES	FOOD	SUMMER ROOST	WINTER ROOST	HABITAT TYPE
<b>PALLID BAT</b>	Walking insects	Caves/mines, cliffs, tree hollows,	Caves/mines, cliffs	Desert, oak woodland and
<b>BIG BROWN BAT</b>	Flying beetles	Buildings, tree cavities	Caves	All habitat types
<b>SILVER HAIRED BAT</b>	Flying flies	Tree foliage or cavities	Unknown	Deciduous and coniferous forest
<b>RED BAT</b>	Flying moths	Tree foliage	Leaf litter, tree hollows	Deciduous forest
<b>LITTLE BROWN BAT</b>	Water insects	Buildings, caves	Caves/mines	Coniferous and deciduous forest, chaparral
<b>CAVE MYOTIS</b>	Flying moths	Caves	Caves	Desert, chaparral
<b>YUMA MYOTIS</b>	Water insects	Caves/mines, buildings	Unknown	Desert, grasslands, chaparral
<b>EVENING BAT</b>	Flying insects	Tree cavities, buildings	Unknown	Deciduous forest
<b>CANYON BAT</b>	Flying insects	Cliffs, rock crevices	Caves	Desert, grassland, chaparral, conifer-
<b>TRI-COLORED BAT</b>	Flying insects	Tree cavities	Caves	Chaparral and deciduous forest
<b>MEXICAN FREE-TAILED</b>	Flying moths	Caves, buildings	Caves (migrates to warm areas and doesn't hibernate)	Oak woodlands and chaparral, desert

**Based on your findings from the range maps which bats do you predict do NOT live in your area?**

**Based on your findings from the range maps which bats do you predict DO live in your area?**





