



Friends of NCTC Program Activity

Going Batty!

(ages 5 and older)

Bats are flying mammals! Over hundreds of years, they have frightened some people, but really, they are important because they eat insects and are pollinators.

Background

Bats find insects to eat through echolocation. It works like sonar, but bats have been using it a long time before the Navy started! Bats emit a series of high-pitched squeaks (we can't hear it) that bounce off objects like flying insects. The sound waves that bounce off are heard by the bat and the bat's sensitive ears allow it to quickly find the insect and eat it! (Moths and mosquitos are favorites and bats can easily eat 600 mosquitos an hour!)

What You Will Need for This Project

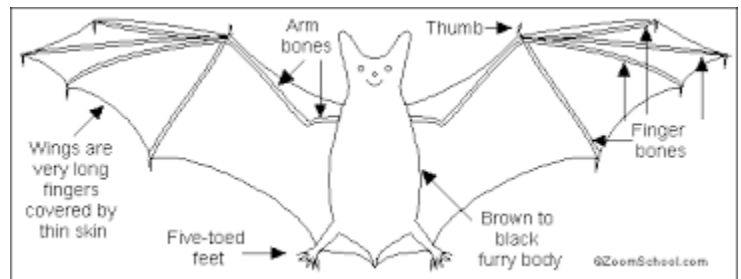
Bandana
Elbow Macaroni
Large Glass Jar
Bat House Plans

What to Do

Is It a Bird? It's Not a Plane! (Bats are Mammals)

Bats are mammals because they are warm-blooded, have fur on their bodies, and give milk to their babies. Being able to fly is just a cool thing, but it doesn't make them a bird. Bats have been around almost as long as the dinosaurs! You can compare your arms and hands to the wings of a bat. What do you think? We are more similar than not!

Are Bats Really Blind? Maybe you have heard someone say "blind as a bat?" That's because they fly to hunt at night and people think they can't see...but they can! Bats depend on their ears and hearing much more than they do their eyes. They use echolocation to find their prey. Bats emit a series of high-pitched squeaks (we can't hear it) that bounce off objects like flying insects. The sound waves that bounce off are heard by the bat and the bat's sensitive ears allow it to quickly find the insect and eat it! (Moths and mosquitoes are favorites!) When a bat is beginning a hunt, it may send out 10 echolocation pulses a second. When it locates potential prey, it can increase its rate of pulses to 200 per second! That's a lot!



Bat Chow Bats can eat lots of insects—even 600 mosquitos an hour! To find out how many that is, pour out a box of elbow macaroni “mosquitos” into a large glass jar. Write down your guess of how many “mosquitos” are in the jar. You can ask your family and friends to guess, too. Then start counting! Was the total more or less than 600? Whose guess was the closest? Bats must be very busy to catch and eat so many mosquitos every night!

How Do You Compare to a Bat? *www.batcon.org*

>To find your wingspan, stretch both arms out and measure from fingertip to fingertip.

>To find your wingbeats, flap your arms like wings for 5 seconds and have someone else count. Divide that number by 5 to find your rate per second.

>To find your heartbeat, take your resting pulse for 15 seconds and multiply by 4. For your active heartbeat, do jumping jacks for 1 minute, then immediately take your pulse the same way again.

>To find your food consumption, divide your weight by 32, and that is the number of pounds of fruit you would have eat every day to eat like a fruit bat.

	<u>You</u>	<u>Bat</u>
What Kind of Animal Are You?	_____	Mammal
Wingspan (Armspan/length)	_____	6 ½" (bumblebee bat) Almost 6' (Great Flying Fox?)
Number of Fingers	_____	4 fingers and 1 thumb
Weight	_____	Most bats weigh less than 2 oz
Heartbeat Resting (minimum)	_____	less than 100
Heartbeat Active	_____	as many as 900
Wing Beats/Second	_____	12 (little brown myotis)
Food Consumption	_____	Flying Fox Bat can eat 2 ½
	(1/32 of your weight)	times its body weight in one night
Lifespan	_____	Some bats live 40 years!

It's A Bird! It's A Plane! It's A Bat! You can make your own flying bat plane by using the outline below. Don't forget to color the bat first and send a picture of your creation to *friendsofnctc.org* so that we can post it on our website! (*Graphic from Bats at the Library, 2008 Brian Lies. May be copied for school, library, or home use.*)

Play Bat and Moth Have you ever played the game Marco Polo? Well this game is exactly like it, except you don't need a swimming pool. You DO need a bandana as a blindfold. Gather a group of friends in a circle. One person is the bat and another is the moth. Both stand inside the circle. The bat is blindfolded and is seeking to tag the moth by saying "bat." The moth responds "moth" every time the bat says "bat" and can move anywhere in the circle. The bat will be listening to determine where the moth is and hold its arms out in front, trying to tag its prey. Some bats are very quick while others will take their time. Although there will be lots of squeals and laughs from those in the circle, it helps the bat to have everyone stay as quiet as possible. That's hard, but the bat is hungry and depends on hearing (echolocation) to find the moth.

You can play this game at school. Just explain the rules to your teacher and remind them that the only supply needed is a bandana. It can be played inside or out. Have fun playing!
(Bat and Moth was originally published in the *Sharing the Joy of Nature* by Joseph Cornell, 1989.)

Build a Bat House Bats need homes, just like you do. You can build a simple bat house out of wood using a plan you can find online. You can also find bat house kits that you just put together (with the help of an adult). You don't need to be afraid of giving bats a home. They will pay back your kindness by eating the mosquitos!

Helpful Hints for Adults (books to read, other websites, links)

You can find plans for a bat house online. One example is: <https://www.thespruce.com/bat-house-plans-4775009>

You can also find bat house kits at Amazon and other online sites.

www.amazon.com/gp/product/B000HHQBKO/ref=as_li_tf_tl?ie=UTF8&camp=1789&creative=9325&creativeASIN=B000HHQBKO&SubscriptionId=AKIAIBX4MGJBG42TO3NQ&linkCode=as2&tag=bestprodtagk107021-20&th=1

Stellaluna by Janell Cannon (a classic story!)

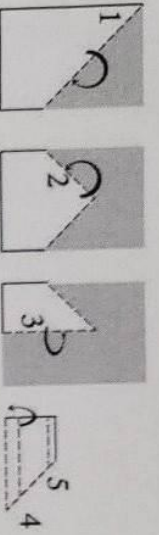
Bat Loves the Night by Nicola Davies

Little Red Bat by Carole Gerber

Nightsong by Ari Berk

Edu-Bat Trunk If you live in West Virginia, you can take advantage of the bat education trunk available from the National Conservation Training Center in Shepherdstown. The activities are currently being revised, but will be ready for use in January 2023. Contact Mark Madison (mark_madison@fws.gov) for more information.

Just be aware. Most bats are perfectly harmless and eat lots of insects, but some bats can carry rabies (although most don't.) It is very important to be aware of and avoid bats that are on the ground or one that is active during the day. It is best to never pick up a downed bat unless you are wearing very heavy gloves. **If you know you've been bitten or scratched** by a bat — or if infectious material (such as saliva or brain material) from a bat gets into your eyes, nose, mouth, or a wound — wash the wound thoroughly with soap and water and seek medical attention immediately. Whenever possible, the bat should be captured and sent to a laboratory for rabies testing. Contact your local health department as quickly as possible if something like this happens.



1. Fold on line 1 away from this side.
2. Fold corner down along line 2 away from this side.
3. Fold in half along line 3, so bat faces out.
4. Fold wings out along line 4, and wing tips up along line 5.

