Dear Boy Scout Parents:

Your child has been registered for our Mammal Study Workshop. This letter will provide you with some important information to prepare for your arrival as well as inform you of our cancellation policy.

Upon reservation, a workshop deposit fee was paid to reserve your spaces ($14 for Boy Scouts). **You have until one month prior to the event to cancel your reservation and receive a full refund. After this month deadline, workshop fees will not be refunded.**

Be sure to notify your group leader how many parents and/or siblings will be attending that day. Adults and siblings must be included in the reservation in order to receive the group rate. **Individuals must pay admission upon arrival. Payment will NOT be accepted for individuals that have NOT arrived.**

The following activity must be submitted after the workshop via mail or email (just a photo):

Requirement 5. Working with your counselor, select and carry out one project that will influence the numbers of one or more mammals (bat box- see boy scout webpage for more information).

**** If you have any further questions about merit badge requirements contact Michelle Morici 215-405-1556 or manella@ansp.org ****

On the day of your Workshop Program, please enter using the 19th Street Entrance **at least 30 minutes prior to your program**. See your group leader for directions to The Academy and parking information. You may store lunches, coats, and other articles in the Commons Room, located on the ground floor near the 19th Street entrance.

To maximize scout participation in the workshop we ask that no more than one adult per ten scouts attend the workshop room. Additional parents and siblings may be asked to visit the exhibits during the scout workshop.

Please note: badges / pins will not be distributed by The Academy.

If you have any other questions regarding your reservation, please contact the Reservations Office at 215-299-1060.

Thank you for participating in our Scouting Program, enjoy your visit.

Reservations Office
Weekdays 215-299-1060
Weekends 215-299-1019
E-Mail: reservations@ansp.org
Internet: http://www.ansp.org

Bat Boxes Project

Background:
According to Bat Conservation International, a single bat can capture 500 to 1,000 mosquitoes in a single hour! Pesticides mostly kill the mosquito's predators rather than mosquitoes. Bats are also interesting because:

- In many ecosystems, they play a key role in pollinating plants.
- There are more than 1,000 species of bats in the world!
- Some bats use echolocation, or high pitched chirps which bounce off objects in front of them, to find their way in the dark.

Other Bats Facts
Bats are one of the most prolific forms of mammals with over 900 species living in the world and making up over 20% of all mammals. Bats are the only form of mammal to have attained powered flight. Several mammals like flying squirrels glide but cannot stay in the air for long like bats can. In the United States there are 45 species of bats and seven species in the U.S. are in danger of extinction.

How many bats have rabies?
Less than 0.5% of bats have rabies. Since 1960 there have only been 40 reported cases of humans getting rabies from bats.

Do bats suck blood?
No bats SUCK blood but a few bats eat blood. There are some Vampire Bats that live in Central America, South America and Mexico that feed on the blood of warm-blooded animals like horses, cattle and birds. The Vampire bat makes a small cut in a sleeping animal's skin and laps up the blood from the wound. Vampire bats need about 2 teaspoons of blood a day to live.

When can I see bats?
Bats like to come out to eat at night around dusk. Bats flight pattern is much more erratic than birds so look for this pattern.

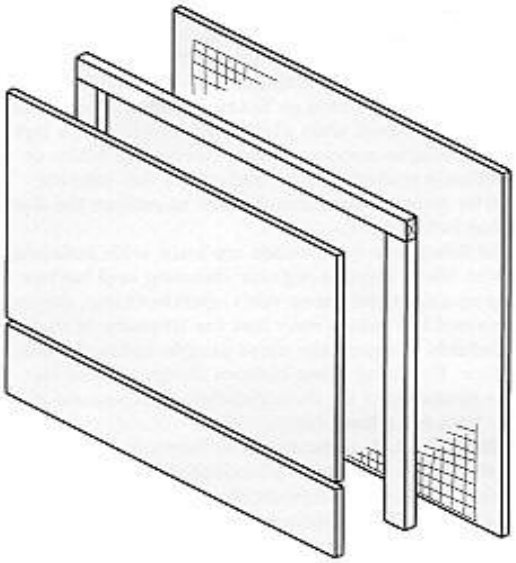
Why Build a Bat House?
You might be surprised: bats don't always live in caves. Some bats spend winter months in caves, but most bats spend summers in trees, under bridges or in old buildings, where they give birth and rear young. Your goal is to make a bat house that mimics the space between bark and a tree trunk. That would be the bats' ideal nursery. That's why the space inside a bat house is very narrow, unlike a bird house which would house a nest. Bats like tight spaces. They also need it nice and warm for the babies. That's why we paint the box a dark color in most climates and why you can caulk the sides to keep the heat in. Also, you'll be using a screen inside the box. That makes it more like tree bark and easier for the bats to climb up. You might wonder why you need to build a bat house. Why can't the bats just find a nice tree? That is the challenge for many bat species as forests are cleared. Ideally they would live in a natural home but we build bat houses to help those who can't find space in a forest.

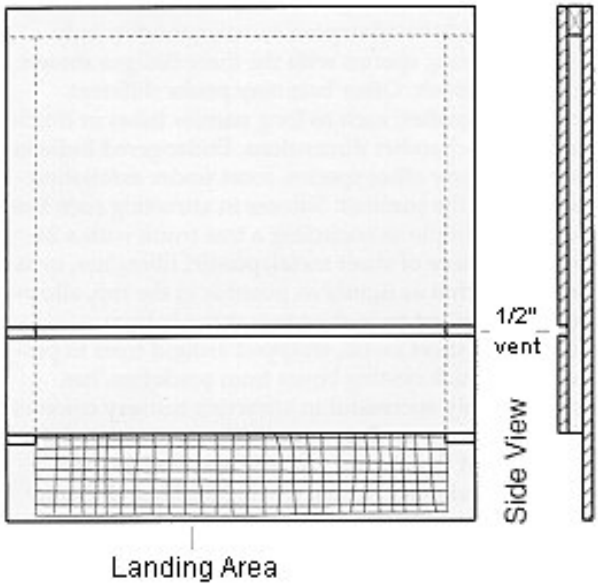
BUILD A BAT HOUSE

You will need to build the bat box at home with an adult's supervision, hang it in a tree or on a building. Send a picture of the bat box to Michelle via email or postal mail: morici@ansp.org or Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia PA, 19103. Make sure to include your mailing address to receive confirmation that you have completed all parts of the Mammal Study Merit Badge.

Materials: 3 pieces of 1"x3" framing wood: 2 pieces = 8" long; 1 piece = 12"long
One large (12"x14") wood piece
One Small (12"x10") wood piece
One sheet of nylon screen (12"x14")
Nails (18)
Hammer (not provided)
Paint and caulk (optional, not provided)

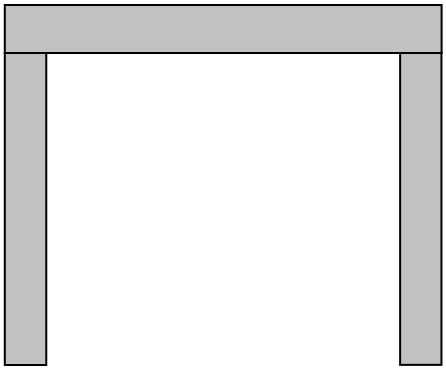
* Note: Our bat boxes will not have a vent – this retains more heat*



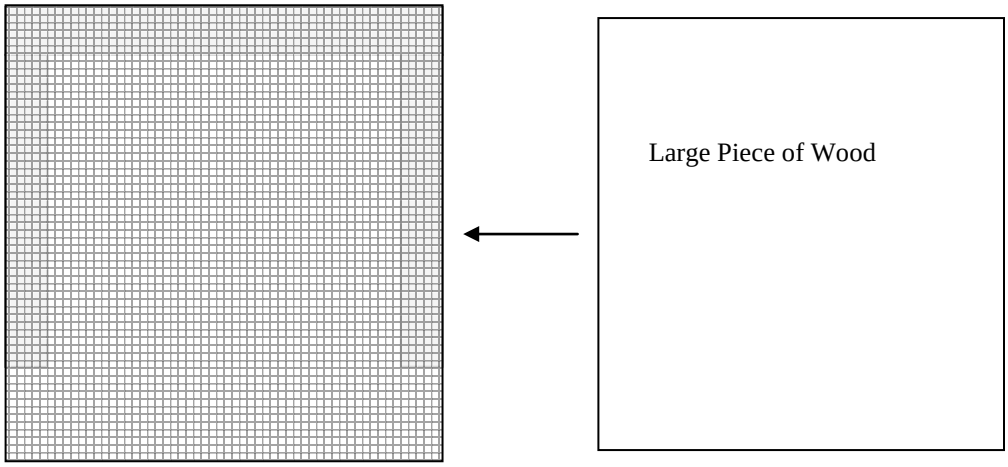


1. Arrange the three pieces of framing wood FLAT on your work surface as below

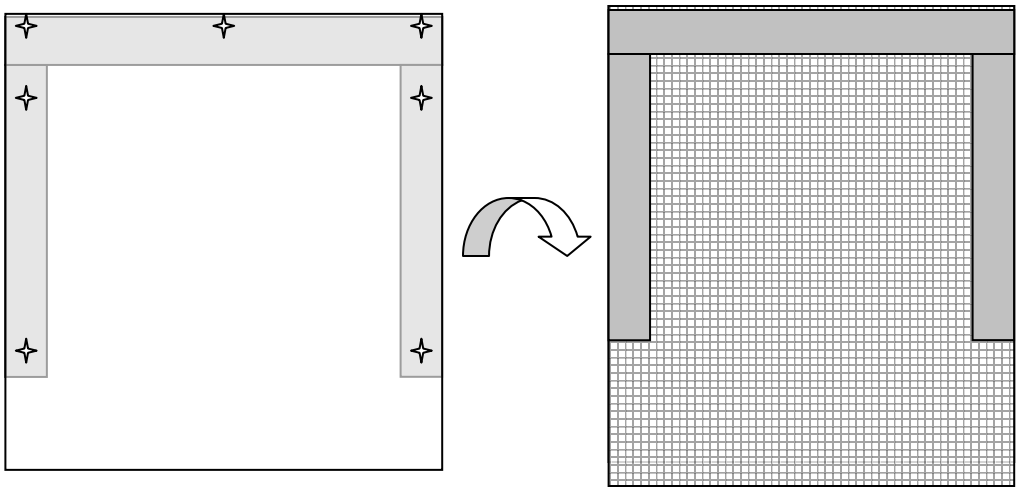
- ✯ The longest piece should be at the top with two “legs” below it
- ✯ The frame will form the chamber for the bats to stay in - it will only be about 1 inch deep when you are finished but bats are very small and feel secure in tight places



2. Place Screen **ON TOP** of the frame
3. Place the large piece of wood **ON TOP** of the frame and the screen. Make sure to line up the edges – you make use glue to keep the screen in place if it keeps slipping around



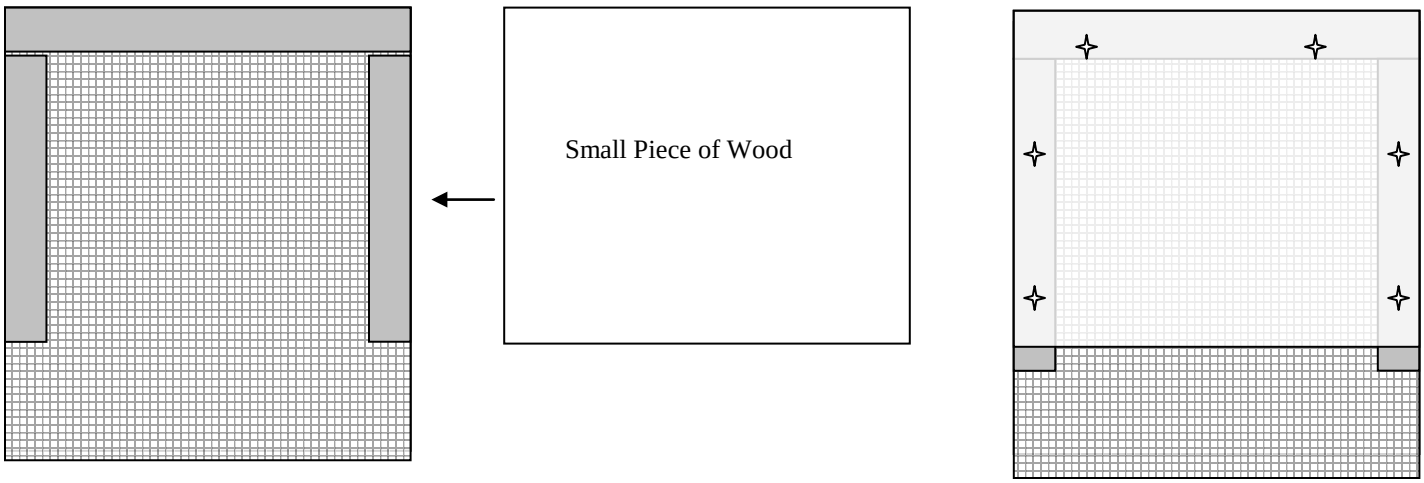
4. Use nails ✧ to secure the large piece of wood to the frame. Make sure the screen is hanging free at the bottom and sandwiched between the frame and the wood



5. Flip the whole thing over so the large piece of wood is down and the frame is facing you

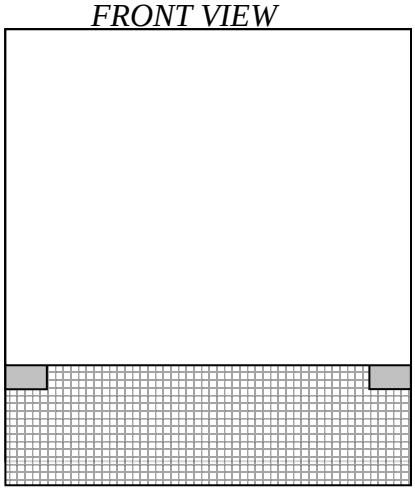
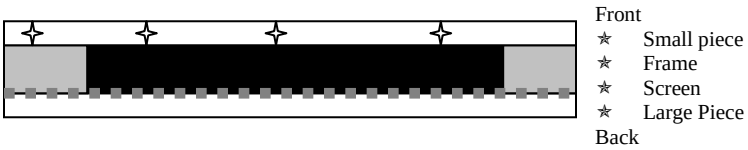
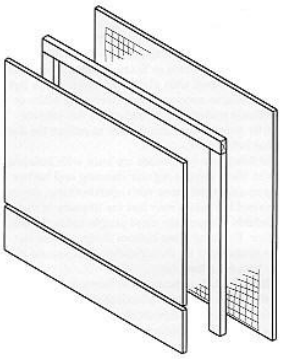
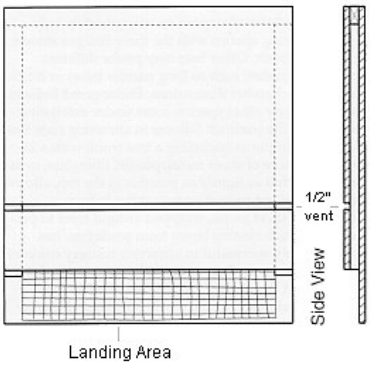
6. Place the small piece of wood over the frame and nail ✧ it in place - being careful not to put the nails in the same area as those on the back of the bat box – there will be a large "landing area" covered in a flap screen at the bottom – this allows the bats to land easily and climb up into your bat box

- To keep the screen in place on the bottom you can also nail the screen to the bottom side of the box



7. Your completed bat box should be hung on a tree or building, preferably facing south where it will absorb the most heat. You may paint the outside of the bat box with a dark-colored, water based, exterior paint to absorb more heat and allow the bats to use the box in colder weather. You can also use caulk to seal the sides and make the bat box waterproof. Several bat boxes can be mounted around a tree or can be stacked to make a "bat apartment"

FRONT VIEW



BOTTOM VIEW OF BAT CHAMBER