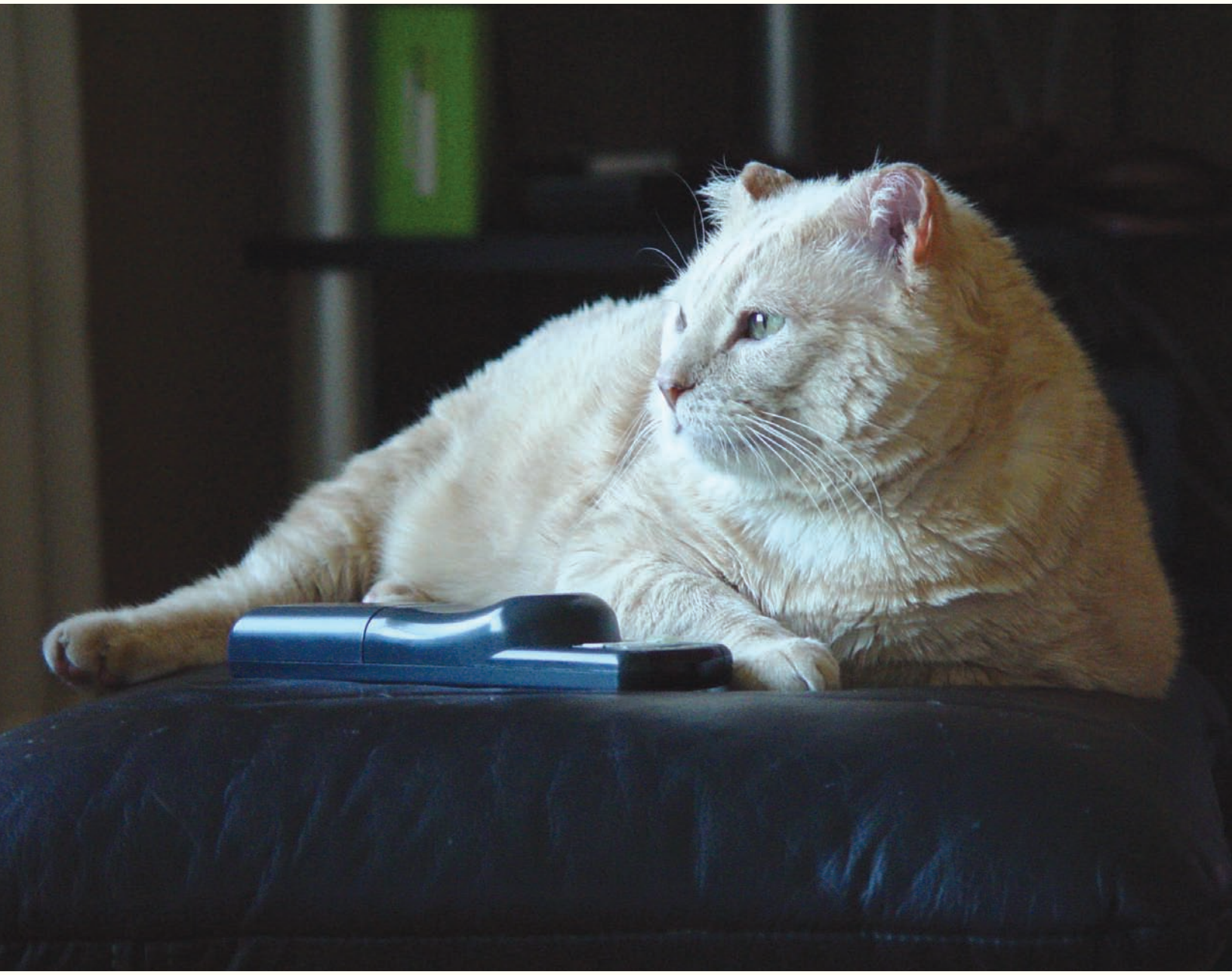


Red's R10 Insulation Cat Shelter

helping cats survive in cold, northern climates

RED'S STORY

As I was leaving my mother's house in 2001, a fairly warm winter day, I noticed a cat running full-tilt across the busy street. I walked down the back lane to investigate (because I have a policy to help all lost cats). There, under a car, was a ratty, peach-colored cat with no ears or tail. Feeling bad about his condition, I tried to get close to him, but he looked at me in fear and ran away. Too bad, I thought, the long, cold winter will probably claim another life. Never saw him again that year.

Winter 2002. Minus 30 degrees. Driving home from work I noticed a cat crouched under a car on a fairly busy street. I went to investigate. Holy dinah! It was the same cat I spotted the year before. As I approached, he ran into a yard nearby where he stopped to crouch on a doorstep. OK, I thought, if this is his home, I need to have a chat with his owner. No one was home, so I stuck around until an elderly woman came up the walk. The story she told was quite sad in many ways, as every human this cat had ever known had let him down—including her (she was oblivious to this fact).

She had been feeding this poor guy for at least four years, after her neighbor kicked him out at the ripe old age of one. Feeling bad for him, she tried taking him in, but he would fight with her cat, so, out he went. Again. She let him live in her uninsulated garage on a chair with a couple of coats to keep him warm (so she thought). He would come to her door several times a day for something to eat and drink. She recalled how cute he looked when he had all of his ears and tail, when he walked without a limp and when he had fur on his nose. I asked her why she hadn't taken him to a shelter. She felt he had a better chance of survival out on his own. A misguided sense of logic.

Well, time for action. I helped him survive the cold winter days until I could make arrangements for proper care. I built him a feral shelter out of styrofoam insulation, placed an old fur coat inside and placed the shelter inside the woman's garage (he used it the day I brought it). I also brought him dry cat food and water several times a day (the woman provided warm, moist food and warm milk at her doorstep). I finally tricked him into sitting in a kennel. I got the woman to shut the door and brought him to my vet clinic.

The vet thought Red might have been around six years old. They neutered him and treated his ear mites, fleas and an eye infection. He had numerous bite marks, scratches, lumps and bumps. His x-rays showed a previously broken hind leg and hip (likely from being hit by a car) that had healed improperly at the various fracture locations, missing and broken teeth and his bloodwork revealed that he was feline immunodeficiency virus (FIV) positive (though it is a similar condition as HIV, humans cannot get FIV, but other cats can acquire it through deep bite wounds). On top of all that, he had pretty much reverted back to a feral state and was terrified of people. This cat was not a good candidate for adoption from any shelter at this point in time. But he was fine by me.

So, I set up a large spare room in my house just for him (so he couldn't mingle with the other felines) and we began a long process of recovery and trust. After six weeks of daily contact (feeding, sitting quietly, catnip, cat treats), Red finally let me pet him while he was eating. And he started purring. I think I recall crying because I was so happy—I had thought that he might never trust me. He eventually took to my husband as well, but he never got along with the other cats. I tried integrating him into my multi-cat household, but he always felt he had to fight for his territory and it was just too risky to keep them all together because of his FIV.

Today, almost five years later, he still finds comfort in his special room (we custom built a door with bars and a clear panel so he can see the other cats without being able to attack them), but he also gets the run of the rest of the house in the evening while the other cats are in the rec room (thank goodness for pocket doors). It's been a workable arrangement for everyone, though far from ideal. He has had a few minor infections since his arrival, but is not on any regular medications for his condition. It's often hard to believe he has FIV (sometimes I think he's healthier than the other cats). After all those years living outside, Red has no appetite for the great outdoors save for his massive window that looks out upon the apple tree, the one with all the birds on it. He loves to play and he's slowly becoming more accepting of new voices and faces.

Still, I often wonder if it's fair for him to live most of his life in a room without free contact with my husband and I. It's something I wrestle with every day. I would be happier if he could spend the rest of his life roaming the rooms of an entire house, with unlimited access to his beloved caregivers. We will keep doing the best we can to see to it that he is happy and healthy and see what the future holds..

Of all my cats, Red is the one that really helps me relax and enjoy a quiet evening. He's the perfect companion cat. Why would anyone throw out a perfectly good cat? I'm hoping he'll live a long life and outlive his disease, but in case he doesn't, I hope he feels these past years with us have made up for all the previous crummy ones.

What follows are the instructions to build the same shelter that helped Red survive the cold. I hope this project will save many more cats from our bitter climate. You **can** make a difference.

Claudia Allen

Update 01/2009:

Sadly, Red became very ill in September 2008 and at the young age of 11, lost his battle with intestinal and liver cancer (one we didn't know he had been fighting for awhile). We let him go to join his beloved "dad" September 27, 2008. I especially miss his non-stop purring, massages and snuggling.

STRAY CATS

This shelter is not meant to be a permanent home for stray pets.

Most lost cats are not able to withstand the cold winter temperatures found in many Canadian cities, even if they make their way to your shelter. Their skin and coats are not thick or dense enough and their ears and tail are easily damaged by the cold, often to the point of literally falling off—a very painful process—or they can die of exposure.

Do not make the mistake of thinking that they will survive an entire winter in this little shelter. It will be a more comfortable and warm place for a night or two until you can bring them to an animal shelter such as your local no-kill shelter or SPCA.

Many of the cats that will find your shelter are friendly and easily enticed into a kennel with some moist cat food. Some may live just blocks away and can be returned to their homes. Those who are more wary, can be trapped in a humane trap and brought to an animal shelter. These cats begin to trust their caregivers once again and will eventually find loving homes.

One advantage of this shelter is that with proper placement, (a convenient, safe location) it can prevent cats from seeking shelter under the hoods of vehicles, which often results in a horrific death for the cat and a traumatic experience for the human.

BARN CATS

If you have cats that live in your barn year-round, this shelter can keep them quite warm and dry during the winter months, so long as it is placed inside the barn. You may want to have one outside of your building for those that need a reprieve from the elements if they wind up outside. Two, perhaps three, cats can sleep together in this shelter (depending on their size). If you have more than a few cats, you may want to build more than one shelter. Keeping the shelter smaller will minimize body heat loss.

If your barn cats are friendly enough, try bringing the males in to an organization that has a Trap, Neuter, Return (TNR) program. Many SPCAs and humane societies offer this service as well as some area veterinarians. If your cats are completely wild, you may have to trap them in humane traps in order to bring them in for sterilization and vaccination.

Should your barn cats have kittens, it is important to leave them with their mother for eight weeks (until they are weaned), and then attempt to catch them and bring them in for adoption.

TRUE FERAL CATS

Most cats found in cities, at some point or another, have been someone's pet. When they have been on their own for a long time, without human contact, they often somewhat revert back to a 'wild' state and their natural instincts return. These cats, with time, will eventually become friendly once again and are not true ferals.

True feral cats have not had any human contact. They may watch human activity from a safe distance, but are as wild as jackrabbits or squirrels. They are very wary of humans and will usually run if one should approach. Sadly, many of these wild cats die due to disease, malnutrition and exposure from inclement weather. Quite often, these cats are found on farms or in other rural areas. In the cities, you will often find them living by a river or other areas sheltered by trees and close to food sources.

Wild cats, as well as strays, are a source of unchecked breeding and contribute to overpopulation. Trapping, neutering and returning is advocated in these and other stray cat colonies. These cats also need appropriate shelter, food and care. Should you want to begin taking care of a feral colony, it should be noted that it is a serious commitment.

The ABCs of Maintaining Feral Cat Colonies by Rebecca Rhoades

Proper management of a feral cat colony is a long-term, year-round responsibility and should not be undertaken lightly. Are you up to the challenge'? If so, here are some guidelines to follow.

• Adhere to the Trap, Test, Vaccinate, Alter and Release (TTVAR) method, which provides humane care while gradually reducing the colony's numbers. Before trapping, make sure your veterinarian is comfortable handling feral cats. Try to negotiate a lower price for the entire colony. Basic veterinary care for each cat should include a physical exam, tests for worms, earmites and contagious diseases such as leukemia and Feline AIDS, vaccinations and alteration. For easy identification of altered cats, ask the veterinarian to notch the ear tip of each cat during surgery. Try to find homes for any cats who appear to have been socialized.

• Keep a record of each cat. Include: description, gender, age, date when altered, vaccinations and, if possible, a photograph.

• Create a feeding site and feed and monitor the colony on a daily basis.

• Leave feral kittens with their mothers until they are weaned at approximately eight weeks, at which time you can capture them and commit yourself to finding homes for them.

• Be alert for any new cats who enter the colony. Immediately trap, test, sterilize, inoculate and identify them before returning them to the group.

• If you have to go away on a trip, move or leave the colony for a long period of time, arrange for a volunteer to handle these duties. If you need to relocate the colony, consult a feral cat expert.

Excellent information on feral cats (care and maintenance and related links) can be found at www.alleycat.org or www.neighborhoodcats.org.

SHELTER LOCATION

Most cats travel the back lanes of cities during the night looking for food and shelter as there is not much traffic at this time. Your shelter should be placed in a location on your property, accessible to the cats, but not in plain view of passers-by. A good location may be up against your garage (closer to your house), perhaps hidden by your barbecue. If you don't have a back lane, you may want to place it under your deck or up against your house or another out-building.

Wherever you decide to locate it, the entrance should be facing either east or south as cold winter winds usually blow from the north or west. Wrapping the entire shelter in a tarp, plastic, or garbage bags, will keep it dry (keep the entrance visible). Piling bagged leaves and snow around it for the winter will give it extra coverage and warmth (leaves and snow are excellent insulators).

The entrance should be sheltered by a cardboard box, wrapped in a garbage bag or other plastic, to keep the wind from blowing in. Cut an opening in the box, larger than the shelter opening, and face it 90 degrees from the shelter entrance. For instance, if your shelter entrance faces east, face the box entrance south so the wind doesn't blow straight through both openings. You may want to place dry cat food inside the cardboard box to entice the cat.

DRY AND COMFORTABLE

Many cats will not step on the reflective surface of the survival blanket so the floor of the shelter needs to be covered in something warm and comfortable. Do not use towels, sheets, blankets, cedar or pine chips as these retain moisture. Better options are hardwood chips, straw, hay, fake or real sheepskin bedding, or real fur (cut-up an old fur coat and give it back to the animals).

Another excellent option for your shelter is to purchase an electrically-heated outdoor-rated cat pad made specifically to heat to its natural body temperature. This pad is made of hard plastic that they cannot destroy and comes with a faux sheepskin cover for comfort. If you are doing an Internet search for this product, reference K & H Manufacturing (makers of heated pet beds).

Ensure that the one you purchase is rated for outdoor use. Indoor use pads do not hold up to severe elements and frigid temperatures. They should not be used as they can be hazardous to the cat's well-being (fire risk, etc.).

DO NOT use a human heating pad of any kind. This type does not have a thermostat set to heat only to the cat's body temperature and can get too hot and cause burns.

KEEPING THE LID ON

Since access for cleaning is necessary, it is important that the shelter lid be removable. One simple way to do this is to lay a piece of plywood or a couple of two-by-fours across the top to weigh it down. This will also keep your plastic covering or tarp from flying away.

"TRAPPING" FRIENDLY CATS

If the cat that has made it's way to your shelter is very friendly, entice it out with some food, place it in a kennel and take it to an animal shelter or veterinarian. It may have an ear tattoo or a microchip that will identify its home.

If the cat is a bit wary, place some moist food in a kennel. Place the opening of the kennel up against the opening of the shelter and wait for the cat to enter the kennel to eat the food. Slide a piece of cardboard or wood between the two openings and hold it against the kennel opening so the cat doesn't run out. Slide the kennel over until you can close the kennel door. Take the cat in to be checked.

TRAPPING FERAL CATS (WARM WEATHER ONLY!)

If the cat is entirely unfriendly, **trap in the fall when it is still above zero or wait until the spring when it is warm**. Borrow a humane trap (animal shelters usually loan these out), place food at the closed end of the trap, cover the trap with a blanket and wait for the cat to enter. The door will snap shut and you can then take it in to be checked and/or neutered.

Trapping and spaying/neutering in the winter is dangerous and should not be done for a several reasons:

1. The cat is at risk of becoming frozen to the metal trap.
2. Because the cat needs all of its energy to survive the winter, it may have difficulty surviving and healing from spaying/neutering at the same time. It's health will be compromised.
3. A cat needs all of it's body covered with fur to maximize warmth. Spaying/neutering may require some areas be shaved. These areas may freeze in very cold temperatures.

The only good reason for using a humane trap in the winter is if the cat is visibly injured or sick and needs immediate veterinary attention. Should you run into this situation, **DO NOT** leave the trap unattended as the cat may freeze and die. Watch for the cat to enter. Remove the trap to a warm, safe place and immediately transport the cat to an animal shelter or a veterinarian for care.

Even if you are trapping in warm weather—**never leave the trap unattended**.

FOOD AND WATER

As stated earlier, you can place some dry food inside the cardboard box entryway to your shelter. You may also want to place dry food well inside the shelter to entice the cat. Alternately, you may want to place some food in an open cardboard box just outside of the shelter.

Since water freezes, it needs to be changed several time a day. If the temperature is not too cold, cutting out a hole in a separate piece of styrofoam and inserting a plastic dish into it for water can sometimes slow down the freezing process.

You may also want to invest in an electrically-heated water dish. They can be found at pet stores or purchased online.

These dishes keep water liquid even at -40°C. You will have to have access to an electrical outlet near the shelter as long extension cords are not recommended.

Never place water inside the shelter or near the cardboard entryway. Cats need to stay dry!

INJURED CATS

If a cat seems injured (limping, bleeding, staggering, etc.) in any way, you will need to take it to a veterinarian or animal shelter immediately. You need to be extremely careful when dealing with injured cats as they may bite and scratch. If you cannot get the cat out of the shelter by any of the aforementioned trapping methods, you may want to consider closing it into the shelter and taking the entire thing to the veterinarian or other organization. If you are not confident that you can do this on your own, call your local humane society or SPCA to see if they can send help.

A WORD ABOUT MATERIALS

It is very important that the shelter is constructed out of R10 or more dense styrofoam insulation (higher 'R' value). You will find this in various colours throughout hardware stores nationwide.

Some hardware stores will cut the styrofoam sheets, on a wall saw, to the size outlined in the manual. Others will not do this for you. Do not let them cut the sheets with a utility knife, as the edges need to be straight and smooth. Call ahead to various stores before shopping to ensure that the saw option is available.

Some types of styrofoam sheets have shiplap edges (a thin lip on the edge of the sheet). If this is the only type of R10 in the correct size they stock, ask them to cut off the lip on the wall saw. Your project will still fit together nicely, but will be a tiny bit smaller.

If none of your hardware stores provide this service, cutting the styrofoam with a hand-held circular saw or radial arm saw or table saw will yield the best results.

The less-dense, white, crumbly, coffee cup-style styrofoam has half the R-value at the same thickness as the other kind and should not be used unless panels walls are glued together to equal a value of R10. This would result in a thicker, more expensive and labour-intensive shelter.

Also, ensure that any product that is used to hold the pieces together is non-toxic (e.g. use a wood glue that does not give off fumes, only use latex caulking—no silicone). Do not use nails or staples in the construction of this shelter.

Gather all the materials you will need:

- R10 (2 inch thick) styrofoam insulation (four 18 x 24 inch pieces (walls) plus two 24 x 28 inch pieces (base and top)
- two 1/4 inch dowels
- Weldbond or similar glue
- reflective survival blanket
- pruning shears
- hammer
- scissors
- ruler or measuring tape
- utility knife
- duct tape (optional)
- latex caulking (optional)
- caulking gun (optional)

Unfold and lay out survival blanket so it is roughly 20 inches wide, with the rest folded underneath.

The blanket will have 4 layers which you will be cutting in an upcoming step. Place one of the 18 x 24 pices of foam on top.

Make sure you will only have a 1/2 to 1 inch foil overlap on all edges of your insulation as you will have to glue the styrofoam edges of these 'wall' pieces to the surface of one of the larger 'base' piece later on.

Cut the blanket slightly larger (1/2 to 1 inch) than your 18 x 24 inch styrofoam as shown.

Remove the styrofoam and cut the folded edges of the blanket so you wind up with 4 individual pieces of blanket.

Do the same for the remaining blanket (you will need 2 additional pieces for the base and lid of the shelter.

Lay out your pieces.

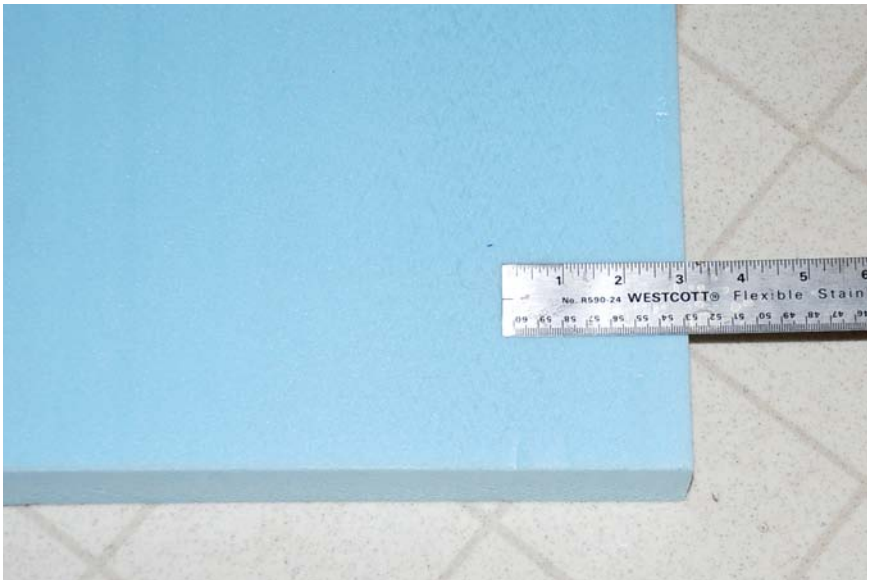
Place your 18 x 24 pieces of styrofoam overtop .

Cover one of your pieces of foam with glue and adhere the foil blanket to the foam piece, making sure the shiniest side of the foil faces up (this allows for more of the cat's body heat to be reflected back to it). Smooth out foil as much as possible. This piece will serve as the back wall of the shelter.

Glue the loose foil edges to the edges of the foam. Ensure that they only overlap 1/2 to 1 inch as you will be gluing the foam pieces together in a later step.

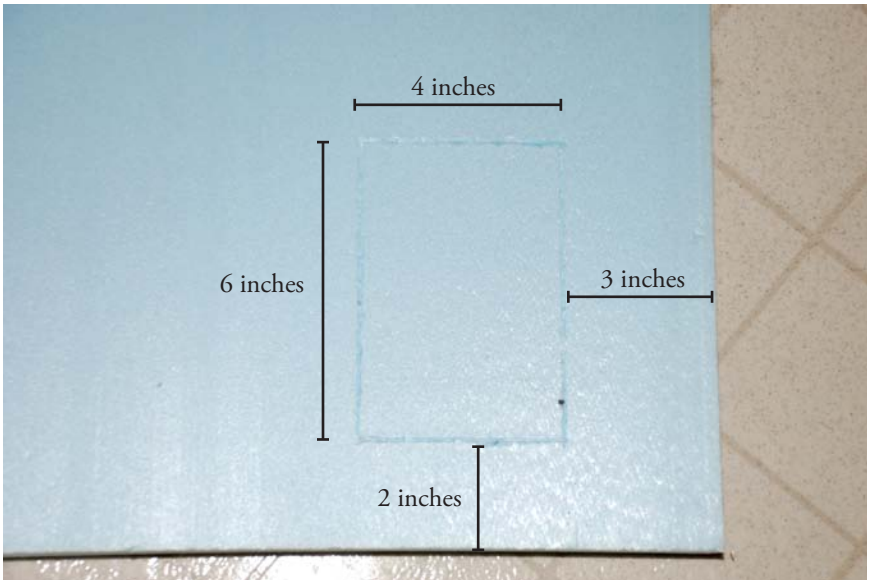
Using another of the 18 x 24 inch pieces, measure out the cutout for the entrance.

With a ruler, measure 3 inches from the right edge and make a mark.



Measure 2 inches from the bottom edge and make another mark.

Mark a 4 x 6 inch square that is 3 inches from the right edge (first mark) and 2 inches from the bottom (second mark).



Using a sharp utility or non-serrated (smooth) kitchen paring knife, cut out the entryway.

Use a sawing motion. Do not try to slide the knife down as this will just tear the styrofoam.

Ensure you go all the way through the styrofoam and the center piece will easily pop out with a push once you have cut the entire perimeter.

Flip the piece of foam over and cover the surface with glue. Adhere another piece of foil to the foam. After you have smoothed it out, poke a hole in the center of your entryway. Make 4 cuts from the hole you poked to each corner of the entryway (you will be cutting an 'x' shape).

Glue the foil flaps you have just created to the inner edges of your entryway.

Glue the outer edges of foil down to the foam edges as you did for the first piece, ensuring that the foil only overlaps 1/2 to 1 inch.

Using one of the 2 remaining 18 x 24 pieces, cut the foil so that it is 1/2 to 1 inch shorter than the foam on the right and left edges only. The foil should cover and overlap the top and bottom by 1/2 to 1 inch (the same as the previous pieces you glued).

Do the exact same for your remaining 18 x 24 inch piece.

These pieces will serve as the side walls.

Using one of the 24 x 28 pieces, glue another piece of foil overtop (it should be 1 inch smaller all the way around as you will be gluing your walls on top of this piece.

Drizzle glue around the entire perimeter of the base (overlapping a little onto the foil is fine).

Flip your door panel upside-down and drizzle glue on the bottom and 2 side edges.

Flip the front panel right side up and glue down on the 28 inch (longest) length edge.

Ensure that the front of the panel is flush with the edge of the base.

Do the same with your back panel. Ensure that the front of this panel is flush with the edge of the base as well.

Drizzle glue on the front-facing edges and bottom edge of your side wall panels.

Glue side panel in place. Do the same for the remaining side wall. Ensure that at least one of the side panel edges is flush with the edge of the base.

If the base is slightly larger than the square created by the 4 walls, slide the walls around so that there are at least 3 sides flush with the edges of the base. This way, you will only have to caulk one edge to keep rain from getting in.

Using pruning shears, cut your dowels into 4 inch pieces.

Cut the tips of the small pieces to a point for easy insertion into the foam.

Push the shelter up against a solid surface, such as a wall or door.

Using a hammer or rubber mallet, gently hammer the dowels (4 per side) into the side walls as shown. Ensure that they align with the center of the front walls and that the dowels go through both pieces of foam.

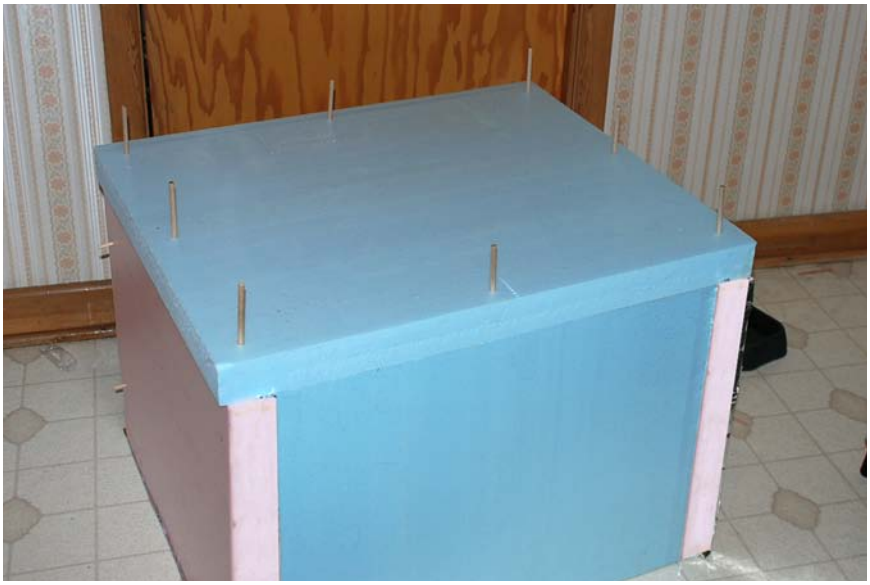
Do this with both side walls.

Hammer the dowels in as far as they will go -- flush with the side wall, if possible.

Once all of the side wall dowels are in, ensure that the walls are still square and that all walls are still tightly connected (that all edges are still glued together).

Carefully flip the entire shelter upside-down.

Using 8 more dowels, hammer them in as shown.



These dowels must be flush with the surface of the base as this is the side that will be sitting on the ground.

Flip your shelter right-side-up.

Prop your lid on top (do not glue it down) and voila, you are essentially done.

You may choose to hammer 2 more dowels in through the lid edges to keep the lid down while it is outside, but I use a varnished sheet of plywood and a couple of bricks for easy access and cleaning.

Place hay, straw, faux or real fur or sheepskin inside for a warm and comfy interior. DO NOT use towels or sheets as they become damp very quickly.

DO NOT place an exposed heat source (e.g. lamp, lightbulb, etc.) inside or near the shelter as the insulation is combustible. It can catch fire, melt and give off harmful fumes.

If you have purchased a C(UL) approved outdoor-rated cat heating pad (see introduction), place a comparable sized sheet of cooking tinfoil underneath the pad to prevent any chance of melting the reflective mylar foil liner or insulation.

If you find that the walls are not sticking together very well, don't worry. Wrap a long piece of duct tape around the top edge of the walls and caulk (latex caulk) all the vertical and/or horizontal seams. This will keep the wind and rain out for sure. Also, if you do end up with a lip on either or both sides of the base, caulk those edges so the rain beads off.

Look, Mia loves it!