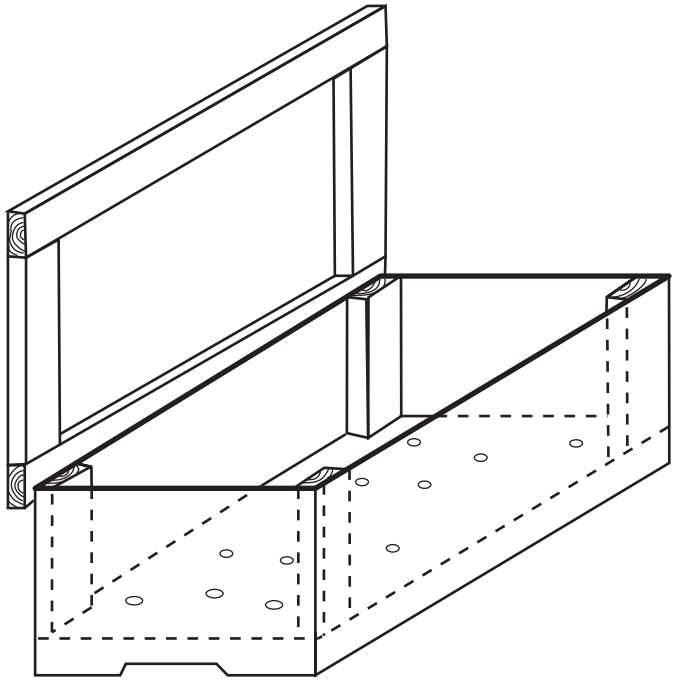
Seattle Tilth Worm Composting Bin



Worm bins are a great way to compost kitchen scraps and other food waste. They are easy to use and maintain, produce wonderful compost, and can entertain children for hours.

The bin described on these pages will accommodate the wastes of 2-6 people. Smaller bins may be built for smaller amounts of waste. Groups generating more waste than a bin this size can process should consider building more bins rather than larger ones.

A wonderful book on worm composting is "Worms Eat My Garbage" by Mary Apelhof. Ask your local bookseller for it, or contact Flower Press, 10332 Shaver Road, Kalamazoo, MI 49002.

These plans come originally from Seattle Tilth, and are distributed without their knowledge or permission.

This system is designed for composting vegetable food wastes using red worms. Food wastes and worms are "bedded" in shredded and moistened newspaper, sawdust, peat, or brown leaves. The worms turn both food wastes and bedding into a high quality compost suitable for use on house plants, seedlings, or gardens. Vegetable scraps are best; do not add more than small amounts of meat, cheese, oil, or other animal products.

To maintain this system simply rotate burial of food wastes throughout the bin. Every 3-6 months compost should be harvested. This may be done in one of several ways:

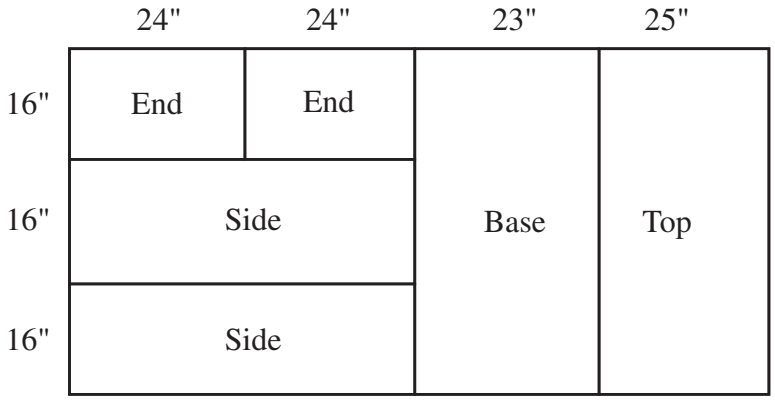
Remove half the compost, worms and all, and use it. Replace the harvested compost with fresh bedding, and begin burying wastes only in the fresh bedding. Within a month the worms will populate the new bedding, the remaining compost can be harvested, and the rest of the bin may be rebedded.

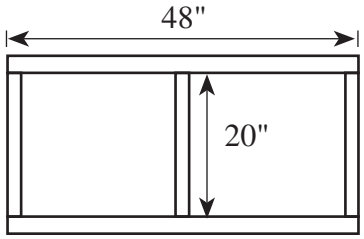
Alternately, pile all the compost in small cones on a tarp outside. The worms will move to the center of the cones to avoid the light. Remove the tops and sides of the cones. Wait a while and repeat. Eventually you will have a solid red mass of worms and worm free compost. Add new bedding to the bin and replace the worms.

During winter months in cold climates the worm bin may be kept in a cool indoor space such as a basement or a warm garage to prevent freezing. A properly maintained, frequently turned worm bin is odorless. Bins may be placed in a shady outdoor spot the remainder of the year. Flies may be controlled by placing a sheet of plastic over the bedding.

The bin can be built for about $35 with new wood and hardware, or less using recycled materials. Worms bins can also be made from wooden boxes or other containers. Any worm bin must have drainage in the bottom and a tight fitting lid to keep moisture in and pests out. A starter batch of worms can often be found in old compost piles.

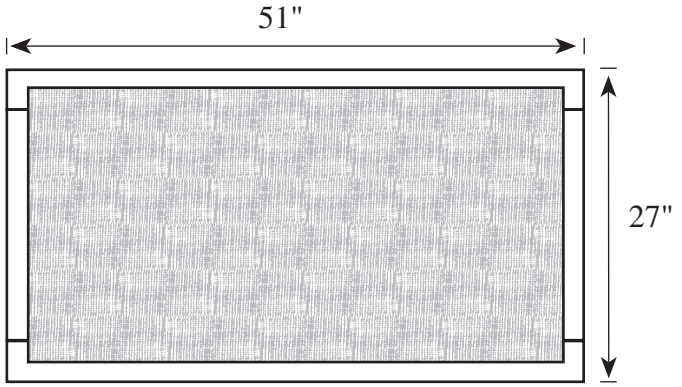
Construction Details





Base frame 2x4s on edge

End view of lap joint



Top lid 2x4 frame with plywood cover

Materials:

- 1 1/2" sheet of plywood
- 1 14' 2x4
- 1 16' 2x4
- 1 lb. 4d galvanized nails
- 1/4 lb. 16d galvanized nails
- 2 3" door hinges

Always use eye and ear protection.

Tools:

- Tape measure
- Skil saw or hand rip saw
- Hammer
- Saw horses
- Long straight edge or chalk snap line
- Screwdriver
- Chisel
- Wood glue
- Drill and 1/2" bit

Instructions

Measure and cut the plywood as shown in the drawing at left. To make the base, cut the 14' 2x4 into five pieces: two 48" long and three 20" long. The remaining 12" piece will be used to make the sides. Nail the 2x4s together on edge with two 16d nails at each joint as shown in the Base Frame diagram. Nail the plywood piece onto the 2x4 frame using the 4d nails.

To build the box, cut three 12" pieces from the 16' 2x4. Place a one foot 2x4 under the end of each side panel so that the 2x4 is flush with the top and sides edges of the plywood, and nail the boards in place. Nail the side pieces onto the base frame. To complete the box, nail the ends onto the base and sides. To reinforce the box place a nail at least every 3 inches wherever plywood and 2x4s meet. Drill about 12 1/2" holes through the bottom of the box for drainage.

To build the lid, cut the remainder of the 16' 2x4 into two 51" lengths and two 27" pieces. Cut lap joints in the corners, then glue and nail the frame together. Center the plywood on the 2x4 frame and nail it with 4d nails. Lay the top on the ground with the plywood side down. Attach the hinges to the top and back using the short screws to the top and long screws to the back. Position the hinges so the screws go through the plywood into the 2x4s.