

HOW TO MAKE ONE OF UNCLE DICK'S HEX NESTS FOR MASON BEES

Construction Checklist

1. Roll 19 nesting tubes (Note 1).
2. Paint 7 tube-ends with sky blue latex (Note 2).
3. Bundle the tubes with 2 elastic bands.
4. Insulate the tube bundle (Note 3).
5. Prepare the shell of the nest (Note 4) and insert the insulated tube bundle.
6. Roll 2 exit tubes (Note 5) and insert them into the top corners of the nest.
7. Store the 5/16" and 1/2" dowels in the bottom corners of the nest.
8. Store the nest for Spring installation.



Note 1: How to make a Nesting Tube

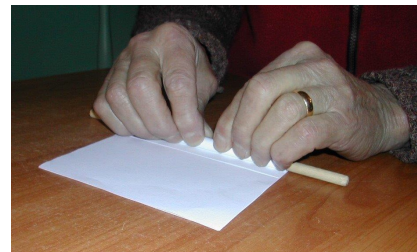
The nesting tube used in the HEX nest is a 5.5" paper tube rolled on a 5/16" dowel and closed off at one end by pinching and taping.

Materials:

1. 1 sheet of white printer paper, good-one-side (i.e. recycled).
2. 1 roll of 'Scotch' tape, 1/2" wide.
3. 1 hardwood dowel, 5/16" diameter, 7" long.
4. 1 kitchen sponge pad.

Procedure:

Cut or tear the paper in half to give two pages, each 5.5" x 8.5". Stack one page on top of the other (with the print facing in) and position them so that a short edge is facing you. Tear off 3 pieces of tape, each about one inch long, and stick them lightly to the back of your left thumb or to the edge of the table you are working on.



Place the dowel across the paper about 3/4 of the way down the page. Lift the lower 1/4 page and fold it back over the dowel and position it squarely over the upper 3/4. Now, with your fingers tuck the paper under the dowel while rolling the dowel up with your thumbs, as shown in the picture. (You may find it easier to tuck the paper if you moisten your finger tips on the sponge).

Once the paper has been trapped under the dowel continue rolling the dowel up with the flat of your fingers, keeping steady pressure on the paper to avoid a loose tube. When you are near the end of the roll, pick up the dowel and finish off the rolling, then seal the tube by wrapping a piece of tape around its middle.

Inspect the two ends of the tube and select the end with the flattest surface. Wrap the second piece of tape around this end, leaving about 1/8" of paper exposed at the end of the tube in case it is to be painted.

The other end of the tube is to be closed off by pinching and taping. To do this pull the dowel back into the tube about 1", pinch the end of the tube so as to trap the edge of the paper in the center of the pinch, and close it by taping over the end. Reduce, as much as possible, the amount of light entering the tube.

Finally, to give the female bee more room to nest, push the dowel up inside the tube against the pinch while gripping the pinch with your thumb and forefinger.

Note 2: How to paint the tube-ends (optional)

If all the tube-ends look the same, the female bee has trouble locating the tube she is nesting in. You can make her life easier by painting the ends of some of the tubes to provide a 'homing pattern'. Bees can see blue and yellow (and ultraviolet) but it is best to use blue for this job because one coat does the trick.

Materials:

1. Select 7 of the 19 nesting tubes with the flattest ends.
2. A small can of sky-blue latex paint.
3. Elastic bands

Procedure:

Shake the can of paint, open it and place the lid with the paint side up on a sheet of newspaper. If several students are going to paint their tubes, have them make a 7-tube bundle held together with one or two elastic bands. Tap the bundle on the desk to square the ends then tap the bundle once or twice into the paint. Blow out the film that sometimes forms across the end of the tube. If only one set of tubes is being painted, tap the tube ends into the paint individually. Place the tubes on paper toweling to dry. Distribute the painted tubes randomly in the bundle of 19 tubes. Hold the bundle together with two elastic bands.

Note 3: How to insulate the tube bundle

Paper towelling is wrapped around the tube bundle for two reasons: first, to insulate the bees against cold nights in early Spring and hot days in Summer; and second, to prevent the bundle from moving inside the (milk carton) shell.

Materials:

1. White two-ply paper towelling: for example "Bounty" that has 44 two-ply sheets per roll where each sheet measures 11" (wide) by 10-1/2".
2. 2 elastic bands.

Procedure:

Tear off 7 sheets of towelling (three 2-sheet pieces plus a single) and fold them in half lengthwise. Wrap them neatly around the tube bundle with the folded edge at the front of the bundle. Secure the towelling with two elastic bands, if necessary.

Note 4: How to prepare the shell of the nest

The shell of the nest is a one-litre milk carton that contains the insulated tube bundle, the two exit tubes, and the two dowels.

Materials:

1. One clean and dry one-litre milk carton. I use the Lucerne 1% milk carton because it is yellow which is one of the colours that bees see.
2. Scissors, stapler and box cutter.

Procedure:

With a pair of scissors cut off the 1/4" white border at the top of the spout. Fold the spout into the carton and staple the four sides of the spout to the carton to keep them out of the way. With a box cutter, cut a V-shaped hatch on the upper side of the carton at its base. This will be used to load cocoons into the carton behind the tube bundle.



Note 5: How to make an exit tube

The two exit tubes, which are located in the upper corners of the nest, allow the bees to leave the nest after emerging from their cocoons.

Materials:

1. 3 half-sheets of white printer paper, good-one-side.
2. 1 roll of "Scotch" tape, 1/2" wide.

3. 1 hardwood dowel, 1/2" diameter, 7" long.
4. 1 kitchen sponge pad.

Procedure:

Use the same procedure for rolling an exit tube as was described in Note 1 for rolling a nesting tube, with two exceptions. First, the exit tube is made with three half-sheets of paper to give it more rigidity; and second, both ends of the exit tube are left open.