



Build a Centipede

After you've made a ladybug or two following the instructions in the video, you might want to try something a bit – longer! These bonus instructions will show you how to build a centipede, like the one shown at the top of the page.

Supplies. For this project, we'll need most all of the same materials we needed for the ladybug, however, while we'll still use the 1½" Styrofoam balls (6 of them) for the head and body, this time you won't need the 3" size. Instead, you'll want one smaller ¾" or 1" ball for the centipede's tail. Other than that, we'll still use pipe cleaners, toothpicks, self-adhesive felt dots, white glue, and acrylic craft paint. And, of course, don't forget the plastic cartoon eyes.

For tools, you'll need a plastic butter knife (like you'd use on picnics), a couple of paintbrushes, and either scissors or wire cutters to cut the pipe cleaners. And as always, you'll want some paper to put down on the table to keep everything clean.

So are you ready? Then let's get started!

Once you've learned to make basic bugs, try something more advanced, like this orange centipede! All photos Dropped Pencil

Materials list

- 1½" Styrofoam balls
- ¾" Styrofoam balls
- Pipe cleaners (assorted colors)
- Felt sticky dots
- Acrylic craft paint (assorted colors)
- Plastic cartoon eyes
- Toothpicks

A note to grownups

- Approximate cost: \$10 to \$20 for enough materials to make 2-3 centipedes
- Average project time: 2-3 hours spread over 2-3 days, depending upon glue and paint drying times
- Supervision: An adult should supervise or do all cutting tasks

Step 1: Cutting the foam parts

For our centipede, let's start by cutting the parts for the body and head. You'll need six of the 1½" balls for this part, plus the ¾" ball for the tail.

Styrofoam is very easy to cut with an ordinary plastic table knife, but make sure you have a grownup's approval and help for this step.

We'll begin by cutting the four balls that will make the middle of the centipede's body. Take one of the 1½" balls and carefully cut off a small part of the rounded edge of the ball (called shaving). Be careful that you don't take off too much. You just need to make a flat surface to attach the next ball to. It should be about the size of a dime or even a little smaller.

Next, shave off the opposite side of the ball so that the two flat sides are directly across from each other, as shown in the middle photo. Repeat these two cuts on the three other middle-body balls, and then set them all aside for the moment.

Neck ball. The next thing we'll make is the centipede's neck. Take another 1½" ball and make the first cut like the others body parts. For the second cut, don't shave the ball directly opposite the first cut. Instead, make the second cut at a small angle, as shown in the bottom photo. This will allow the centipede's head to be set higher than the body.

Tail and head balls. Now we'll make the tail and head. Both of these require just one cut each.

For the tail, use a ¾" ball and shave off one side. The head is made with another 1½" ball. Shave off just one side of the head ball.

With all the cutting done, you are ready to move on to **step 2**, assembling the body.



The centipede's body is made from five 1½" Styrofoam balls and one smaller ¾" ball for the tail.



Four of the 1½" body balls need to be shaved flat on opposite sides, as shown above. Shave just one side of the ¾" ball.



The fifth body ball (the one closest to the head) will be the neck. It needs to have the sides cut at an angle, as shown above.

Step 2: Assemble the head and body

Next, we'll assemble the centipede's body.

To start, lay out all of the body pieces in order, head to tail.

Before gluing the pieces together, we'll need some toothpick halves. Take three toothpicks and break them in half (six halves total). We'll stick these between the body segments to give them extra support.

Now we can glue the body together, beginning with the head and neck. Pick up the head (just one cut side). Apply white glue to the flat side and insert one of the toothpick halves partway into the ball. Then, coat the tip of the toothpick with glue, as shown in the top photo.

Next, take the neck ball (the one with the angle cut into it) and push one of its flat sides onto the glue-coated toothpick, as shown in the middle photo. Hold the two balls together and count to ten.

You now have two segments of your centipede together, so let's keep going. Repeat the process, attaching all the other body balls to the head and neck, extending all the way to the tail.

The finished body is shown below. Be sure to let the glue dry completely before painting the body. However, you can make the legs (**step 3**) while you wait.



Insert half a toothpick and coat the exposed part with glue.



This is how the assembled head and neck should look. From here, keep adding body sections until you get to the tail.



This is how the assembled body should look. Note that the head is up above the body. Let everything dry completely before painting your centipede.

Step 3: Making the legs, antennas, and proboscis

We'll make the legs, antennas, and proboscis from pipe cleaners, similar to the way we did for the ladybugs. However, this time we need ten legs, two antennas, and a proboscis. I made the legs for the centipede shown here from black pipe cleaners, though you can use any color you wish.

Just a reminder, that while you can use scissors to cut the pipe cleaners, it's better to use a pair of wire cutters. In either case, you'll definitely want a grownup's help for this part because tools like these need to be used carefully.

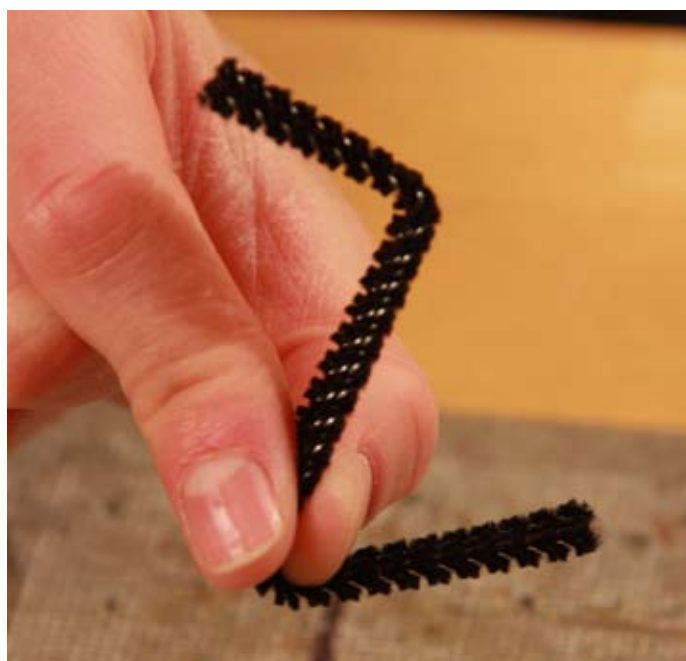
For the centipede, make all of the parts, (legs, antennas, and proboscis) 3" long. That means you'll need thirteen 3" pieces.

Legs. After cutting the pipe cleaners to size, take the ten 3" pieces and make the legs. Working with two or three pieces at a time (so they all match), start by bending the feet, as shown in the top photo. Next, bend the legs in the middle to make the knees (bottom photo).

Antennas and proboscis. Add curls to the antennas by wrapping one end around a pencil. Wrap each antenna around twice. The proboscis loops around the pencil three times, as shown in the bottom right photo.



Bend the feet first.



Then bend the knee.



Antennas loop around twice.



The proboscis is looped around three times.

Step 4: Paint the centipede

After the glue on the body and head are completely dry, it's time to paint your centipede. Use an acrylic craft paint for this step. I used orange for my centipede's body and green for the stripe down the back.

Start by painting the body. Unlike the ladybug project, we don't have anywhere to hold the body while we paint it, so hold it in the middle and paint both ends. Then, you can either wait for the paint to dry before painting the middle, or insert the tip of a paintbrush into the foam in the middle to use as a handle. That way you can paint the entire centipede at once.

After the body paint has dried, you can add stripes. I gave my centipede a bright green stripe. It starts at the top of his head and runs all the way down to the tip of his tail. You can see the stripe in **step 5.**



Use acrylic craft paint for your centipede. Be sure the body color dries completely before adding the center stripe. A 1" paintbrush works well for this step.

Step 5: Painting the bug

It's time for the peel-and-stick felt spots again. On my centipede I used small green dots this time. I placed one on each body segment (including the neck), as shown in the photo. You can include as few or as many spots as you like on



Peel-and-stick felt dots are available at most hardware stores in various colors. These are green.

Step 6: Installing the legs

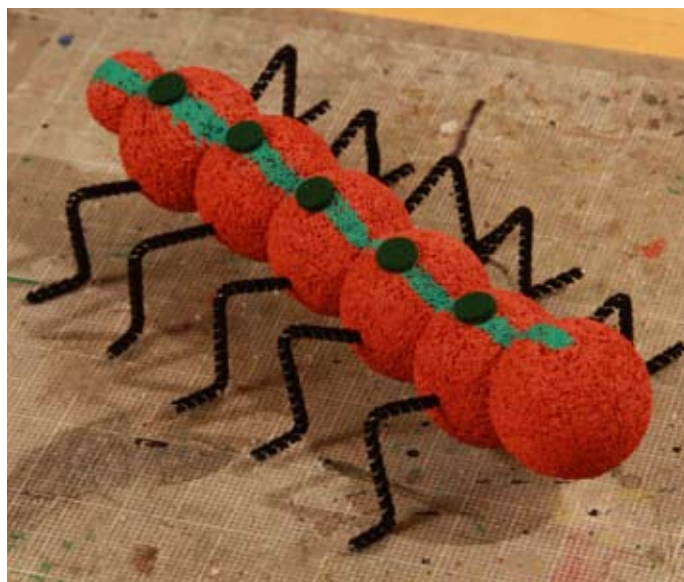


The next step is to install the legs. Each body segment, including the neck, gets one pair of legs. Unlike the ladybug project, the legs on the centipede will go straight into the Styrofoam balls, so you can skip poking guide holes in the foam with a toothpick. You'll want to center the legs on each body segment.

To attach the legs, dip each one in white glue and press it into the body about a ½". Do all of the legs on one side of the centipede first, as shown in the top photo. Make sure the legs are all level before continuing on the opposite side.

Even before the glue dries, bend the legs to pose your centipede. You want to make sure he sits flat on the table. If you need to reset a leg, do so before the glue dries. Pull it out, dip it in more white glue, and then push it into the body in the new location.

The centipede gets five legs to each side, and each body segment gets one pair.



With all the legs in place, the centipede is nearly complete. In this view, you can clearly see his spots, stripe, and leveled legs.

Step 7: Adding the antennae and proboscis

To install the proboscis (remember, that's a feeding tube), dip the end of it in white glue and press it into the head where you think the centipede's mouth should be. (If you want to try something different, don't include a proboscis, but instead make pincers from two short pipe cleaners.)

For the antennae, dip them in glue and poke them into the top of the head. The ones shown in the photo are too far apart, and so I moved them closer to the top of the centipede's head later.



Centipede with proboscis (feeding tube) and antennae in place on the head.

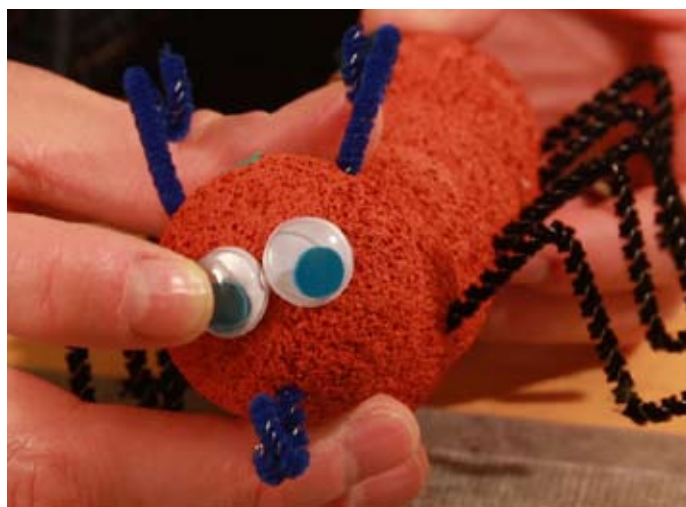
Step 8: Eyes

I used plastic eyes on the centipede, much like I did with the ladybugs, but I used small ones this time.

Attach the eyes with thick drops of white glue and press them in place on the head. You'll need to hold them for a bit until the glue starts to set, and it will help if you can prop your bug with its head pointed straight up until the glue dries.

Once you've built a centipede, I'm sure you'll find all sorts of ways to use the techniques to make other insects. Try making ants by using three 1½" foam balls for the head and body, plus a small ¾" ball for a tail. Paint the ants black or red and give them 6 legs (all mounted to the center ball), two antennae, and a set of pincers, and they'll be ready to look for the nearest picnic.

Now that you know how to do it, the insect kingdom is at your fingertips!



To help the eyes stay on until the glue dries, prop the centipede on end with the head pointing up.

Susie

