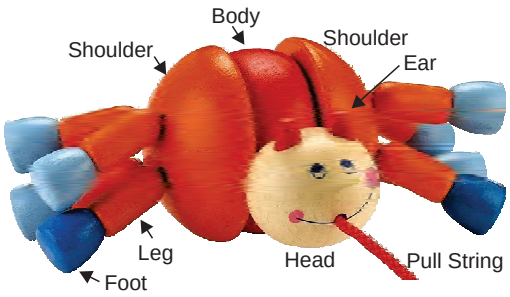
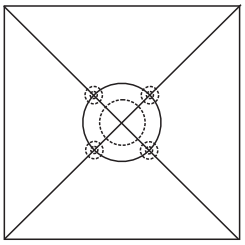
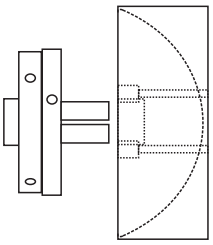
Toy Crazy Spider

As the toy is pulled along the eight legs rotate and give an appearance of walking. You turn 16 pieces of wood as listed here and then colour or paint them before assembly. Wood required: 2 pieces 120 x 120 x 45 for shoulders; 1 piece 100 x 100 x 30 for body; 1 piece 60 x 60 x 95 for head; 1m x 20mm dowel for legs, feet and ears; 1 piece 30 x 30 x 65 for axle, 1 piece 40 x 40 x 60 for pulling knob. This plan uses 2mm braided string to join the legs.

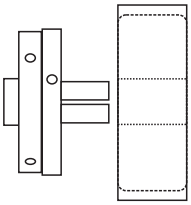




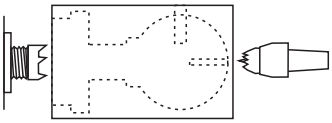
SHOULDERS. Mark and drill the two shoulder pieces as follows. Mark the centre on the proposed inside of the shoulders with diagonal lines from the corners. From the centre draw a circle with a 20mm radius to get a 40mm diameter circle. At each point where the circle crosses the diagonal lines drill an 8mm hole to a depth of 10mm. From the bottom of each of those holes drill a 3.5mm through the wood. At the centre of the circle drill a 26mm diameter hole to a depth of 15mm.

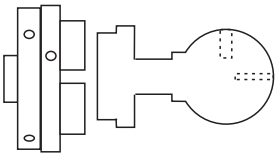


Mount each piece by the centre hole on a chuck with pin jaws. Turn the wood round and to a diameter of 110mm. Turn the outside face to be a portion of a sphere. Round the sharp corners. Sand and finish with a wax or colour of your choice.

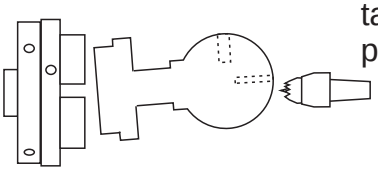


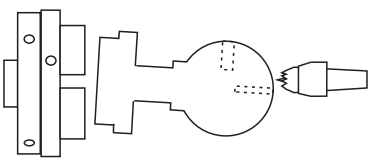
BODY. Mark the centre of one 100 x 100mm face by drawing diagonal lines from the corners. At the centre drill a 28mm hole through the wood. At the centre of one side drill a 20mm hole 15mm deep to attache the head later. Mount the wood by the centre hole on a chuck with pin jaws. Turn the wood round and to a diameter of 90mm. Round the corners, sand and finish with a wax or colour of your choice.





HEAD. Mark the centres on both ends of this wood. Draw a line across the piece 30mm from the right-hand (tailstock) end. On that line, and 20mm in from each edge, drill a 7mm hole 30mm deep for the ears. Mount the wood between centres and turn it to 50mm diameter. On the headstock end turn a 10mm long spigot for the chuck of your choice. Make the next 10mm a little larger than the spigot. Make the next 15mm long to be 20mm thick and the next 5mm to 25mm thick. Turn the part that is still 50mm diameter, and should be 55mm long, to be a sphere. Take 5mm off the tailstock end to remove centre marks. At the centre of the tailstock end drill a 2.5mm hole 10mm into the wood for the pulling string. Sand this sphere.





Make the head oval. Put the holes for the ears uppermost. Bring up the tailstock to almost touch the wood. Ease the grip of the chuck and raise the tailstock end of the wood by 5mm. Tighten the chuck. Turn 5mm of wood off the upper side of the head. Repeat for the lower side. Sand all surfaces. Decorate the head with eyes, mouth and colours of your choice.

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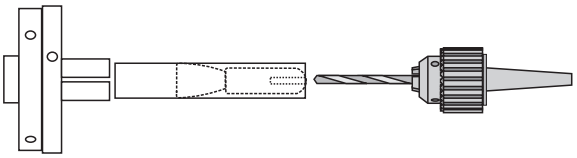
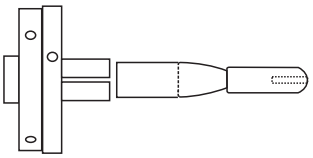
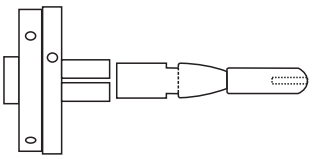


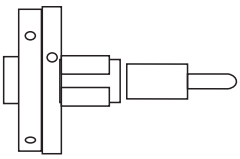
LEG and FOOT. Make eight of these. Mount a piece of 20mm dowel (at least 90mm long) in pin jaws with 65mm protruding. Drill a 3.5mm hole to 20mm in from the end.



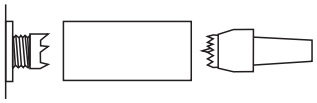
Turn 40mm of the dowel to 15mm diameter, round the end. Make a cut with the point of a skew at 40mm from the end then sand a little curve into that cut.



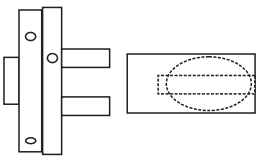
Shape the next 20mm to be the foot from 15mm diameter where it joins the leg to 20mm diameter at the inner end. Start a parting-off cut. Sand and finish with a wax or colour of your choice. Complete the parting off cut and hand sand and finish that end with a wax or colour of your choice.



EARS. Make two of these. Mount a piece of 20mm dowel in a pin jaw chuck. Turn a 25mm length of this to 7mm diameter. Round the outer end. Sand and finish all that cut surface with a wax or colour of your choice. Part it off to be 25mm long.



AXLE. Mount the 65mm long axle wood between centres and turn it to be 26mm diameter. This should fit snugly in the 26mm holes drilled in the shoulder parts.



PULLING KNOB. Turn an egg shape 30mm diameter and 40mm long for a pulling knob. Drill a hole to fit the string, through either the length or width of the knob.

ASSEMBLY. Glue a 100mm length of 2mm (or smaller) string into each of the eight legs. Thread each string through one of the 3.5mm holes in the shoulder parts. Thread it from the curved surface towards the flat surface of the shoulder. Hold the string by its exposed end so that the leg flops a little. Secure the string within the 8mm hole with a knot. Check that there is an adequate flop of the legs, then add a generous application of thick CA glue. Glue the ears into the head. Glue one metre of pulling string into the hole you drilled in the head. Glue the shaft behind the head into the 20mm hole in the edge of the body.
Glue the axle into the centre hole in one of the shoulder parts. Thread the body part onto the axle. Test fit the second shoulder onto the axle. The shoulders and body parts should have little spaces between them. Adjust as needed then glue the second shoulder on.