



# DIY Civil Engineer Outfit



There are lots of construction and civil engineer outfits for children, and grown ups alike, but what about if your soft toy or doll has to go 'on site' with you, and they don't have their own hard hat? Well, we have got you covered!

## Hard Hat

### You will need:

- Standard 'craft' card – thin stock card that you can get from any supermarket or stationery shop
- Newspaper or tissue paper – we used tissue paper here, because that's what we had surplus of, but newspaper will work too
- PVA glue – in a bowl, you may wish to thin it slightly with water depending on the consistency, and this makes it a bit more cost effective too
- Cling wrap
- Sticky tape
- Scissors
- Pencil/pen
- Paint and paint brush

**1)** Using the card, cut a thin strip (no more than 3cm wide) along the length. Wrap it around the head of your soft toy or doll. If their head is bigger than the strip, cut a second one and join them up using sticky tape.

**2)** Place the cling wrap over the top of the soft toy/doll's head. This is to protect it from the glue – however, it may still get on their fur/clothes, so we don't recommend using your absolute favourite Steiff bear, for example!



**3)** Place the cardboard ring on top of the cling wrap.

**4)** Add a layer of glue on the cling wrap and start layering up the tissue paper or newspaper on the glue, reapplying the glue and tissue paper until you have a full layer covering the entire surface.





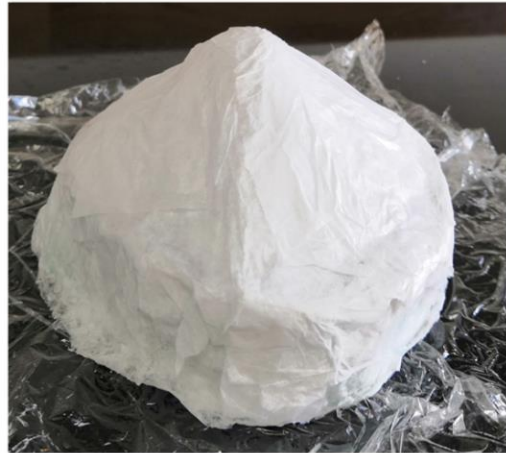
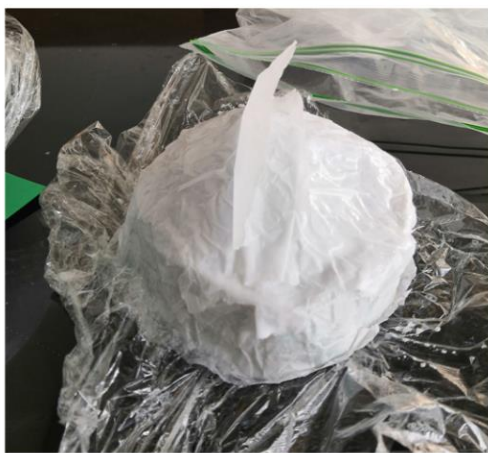
**5)** Leave the layer to dry for a few hours, before repeating the process once or twice more, so you get a decent coverage of their entire head.

At this point, you can remove it from the soft toy/doll's head and leave aside to dry.

**6)** You need to start building up the dome of the hat now. To do this, start layering the paper along a centre line, doubling-it up on itself to form a sort of ridge along the hat.



**7)** Once you have created a ridge, you can layer up the paper more to smooth it a little, and create a more rounded dome shape.



**8)** Now you have to create a peak. To do this, you will need your card again. Place the front edge of your hat 'bowl' along the bottom edge of your card, and draw a pencil line along the front edge where you want the peak to go.





**9)** Draw a curve a few centimetres forward from the line you have drawn – this will create a peak that sticks out from the curve of the front of that hat. When you cut it out, do **not** cut tight to the inner line – cut a lip inside the peak (very roughly, the red area on the photo). This will be used to attach the peak to the hat.



**10)** Once you have cut the peak out, cut slits into the lip along the inside edge, from the edge to the line that follows the front edge of the peak. This can then be folded up to create 'tabs' to use to stick to the front of the hat.

**11)** Using glue, stick the peak to the front of the hat and start to build up layers of paper and glue again, to help secure the peak to the front of the hat.

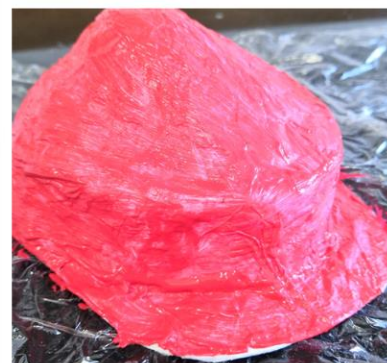






**12)** Once it is dried, add a final few layers of paper and glue to ensure that everything is smooth and secure and that the final shape of the hat has been created. You should bring the paper and glue into the inner edge of the card ring too to make sure the card is covered and well fixed into the hat.

**13)** Once the final layers of glue are dried, you can start painting! We chose red, as that is the colour we use for our engineers at the Trust, but other sites and industries use a different colour code – white for site managers, and blue for visitors for example.



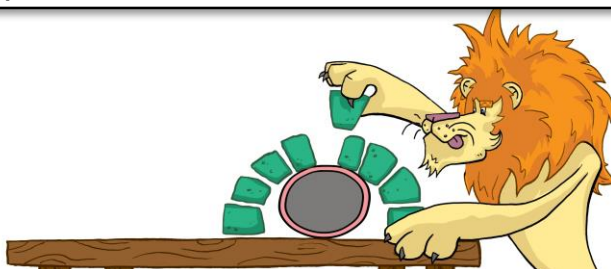
**14)** Any 'normal' water-based ready mix children's paint will suffice, you may just need to build up the colour in a number of coats. Apply a thin coat of paint and let dry before re-applying.

**15)** Apply a coat of paint to the inside too, focussing on the underside of the peak, so the colour matches. Do not layer it up too much, otherwise it may not dry fully and could damage your toy.



**16)** Once the paint has fully dried, you may wish to 'seal' it with a light coat of watered-down glue, or glue and paint mix; this helps create a slight sheen to the paint too.

**17)** Once fully dry, you will have an authentic 'on site civil engineer' hard hat for your soft toy or doll!





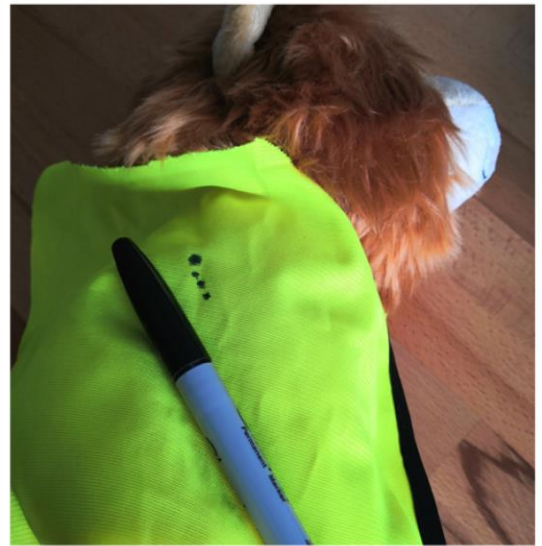
No civil engineer worth their salt would go on to a project site without their hi-vis vest...

### **No-Sew Hi-Vis Vest**

#### **You will need:**

- An old hi-vis vest or a cheap child's size one (from somewhere like the Poundstore) – or some cheap bright yellow/orange fabric
- Black duct tape
- Scissors
- Pen

**1)** Lay the hi-vis vest (or a rectangle of your fabric) across the back of your toy/doll and wrap it around. Mark the positions of the arms/legs and tail (as appropriate) using the pen.



**2)** Cut out the holes for the legs/arms/tail using the scissors.





**3)** Check the vest fits by placing back on the toy/doll, with the arms/legs etc. through the holes. Trim the arm/leg holes as necessary.

**4)** Using black duct tape, create a trim around each of the holes: cut short strips, and then cut slits into one side of the strip – only cut into it about half way. This is a bit fiddly, because of the stickiness of the tape!



**5)** Fold the tape over the outside edge of the hole and on to the inside of the fabric. Fold down each of the slits created to allow the tape to follow the curved edge more closely.

**6)** Use the tape to wrap around the top edge, adjusting the fit if needed, by gathering sections up and taping it together. This creates a neat edge and a 'finished' look to the vest.





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**7)** You have a complete hi-vis vest ready for your soft toy/doll to get to work on site!



That's some of the PPE required to go on site as a civil engineer – to find out more about Personal Protective Equipment, meet Safety Susie and learn more about why we wear PPE, see our website:

<https://rochesterbridgetrust.org.uk/learning-activities/activity-sheets/safety-susie/>



*We'd love to see to see  
your mini civil engineers  
in their personal  
protective equipment.  
You can send your photos  
to the email below, or via  
our FB page!*



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