



E- Slippers

How to begin with e-textiles and wearables

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E- Slippers

textiles + laser cutting
+electronics

Get the LED to shine in a pair of slippers made by you.





What will we learn today?



We will learn how a **LED** and its polarity works

We will **laser cut** a pair of slippers

We learn how to **sew a circuit.**

We will sew a laser cut **textile slippers**



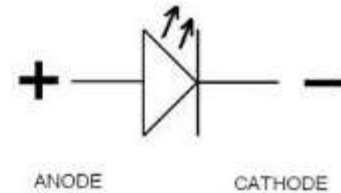
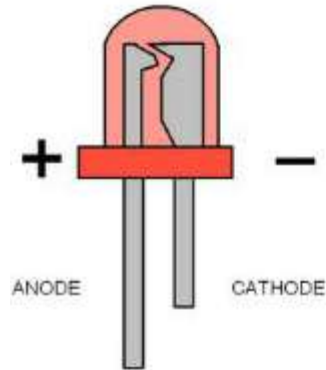


Let's document!

What is a LED?

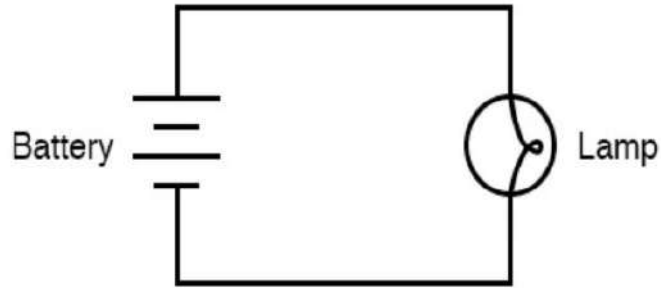
Plus (+) is the longest pin

Minus (-) is the shortest pin





WHAT'S A SIMPLE CIRCUIT ?

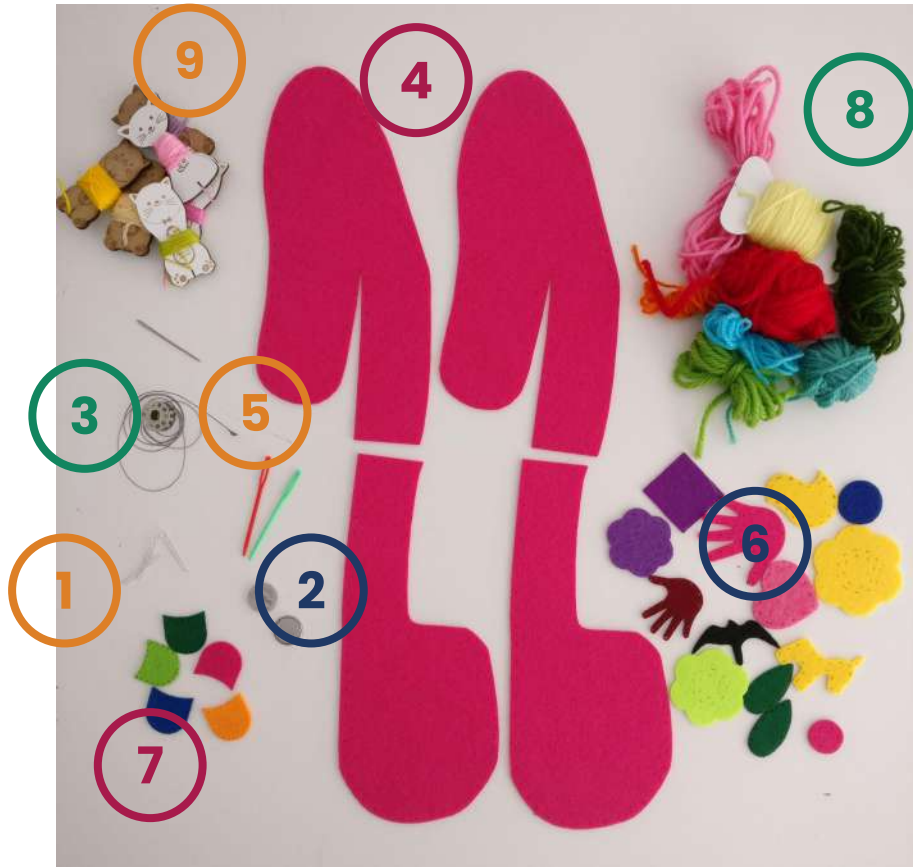


Essential configuration needed to make a circuit

Working definitions of “open” and “short” circuits



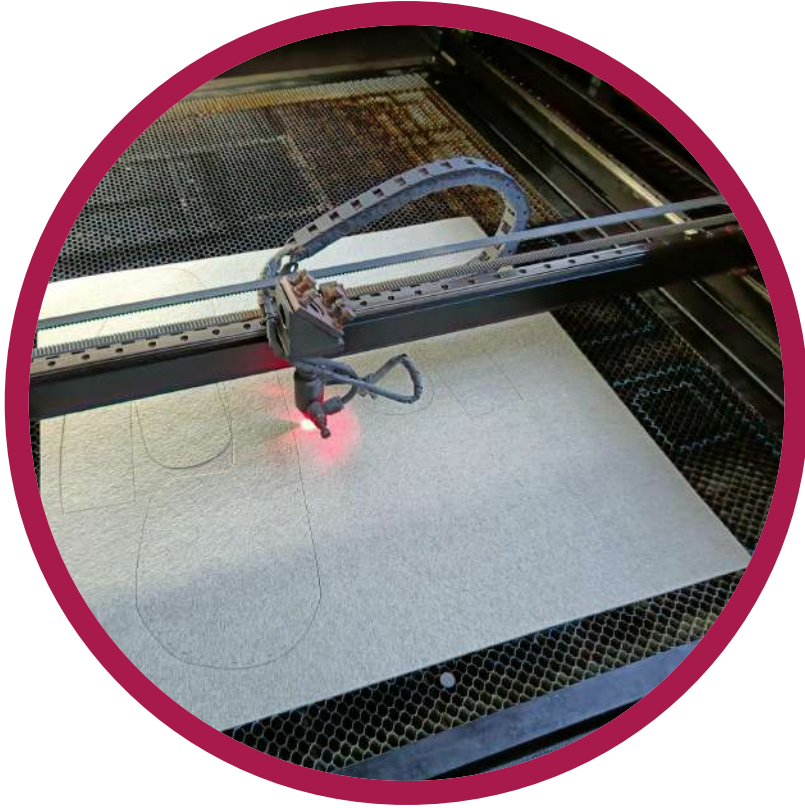
List of materials



1. LED (common cathode, 3 mm)
2. 3V BATTERY 2032
3. CONDUCTIVE THREAD
4. FELT SIZE MOULD OF THE SLIPPERS
5. NEEDLE
6. DECORATION PIECES OF FELT ([cutting file](#))
7. FELT BATTERY HOLDER
8. WOOL
9. COTTON THREAD



Cutting slippers



Cut the slippers template
in the desired size on the
laser cutter



Joining parts 1



Position the different parts
Decide (with a small mark)
which will be the left and
right foot



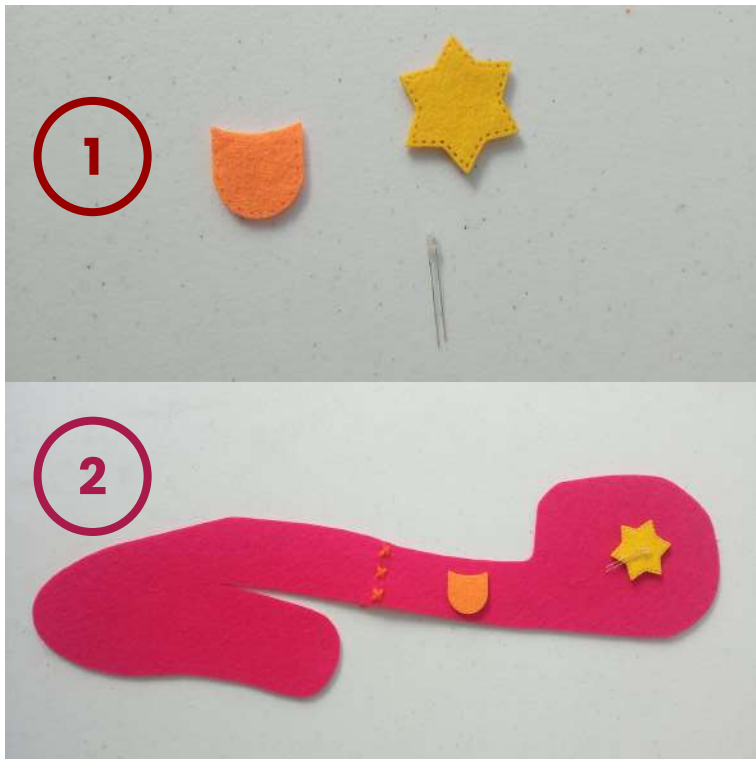
Joining parts 2



Sew the heels together with the chosen wool.



Making the electrical circuit 1



1. Choose the applications you want to put on the slippers.

2. Decide where to place the battery holder, the LEDs and the decorations



Making the electrical circuit 2



Roll up the legs of the led with small pliers.

The - side of the led is cut off (this allows you to distinguish the sides after winding the legs).



Making the electrical circuit 3



Sew the (-) leg of the led
with conductive thread



Making the electrical circuit 4



sew to the place where you want to place the battery.

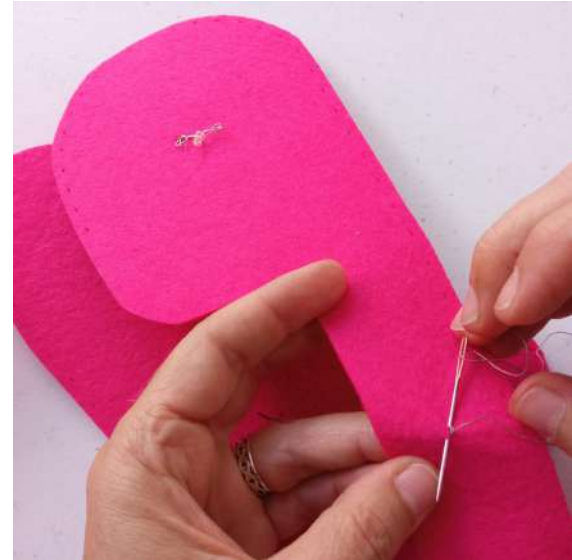
(you must sew inside out so the stitches can't be seen)



Making the electrical circuit 5



Make a small stitch with the thread and finish.





Making the electrical circuit 6



Sew the leg (+) of the led,
with conductive thread



Making the electrical circuit 7

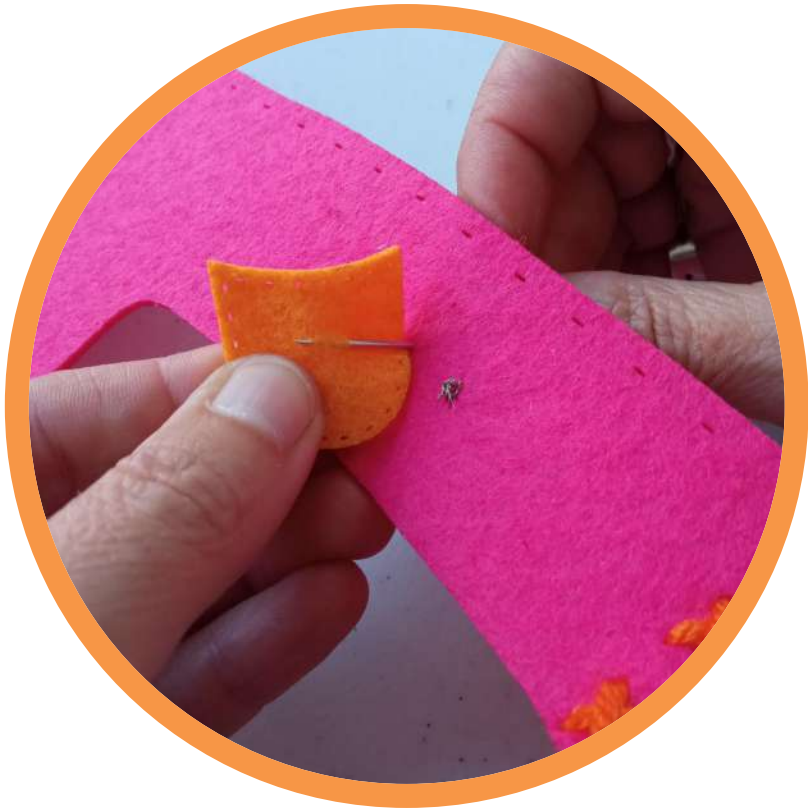


sew the path to the battery up to where you want to put the battery but ending on the inside of the battery holder.

Pay attention to keep the paths separated!



Making the electrical circuit 8



cross the line to the right-hand side.



Making the electrical circuit 9



on the inside of the battery holder make a small stitch with the thread and finish.



Making the electrical circuit 10 - teste





Making the electrical circuit 11



Sew the battery holder in place.



Making the electrical circuit 12



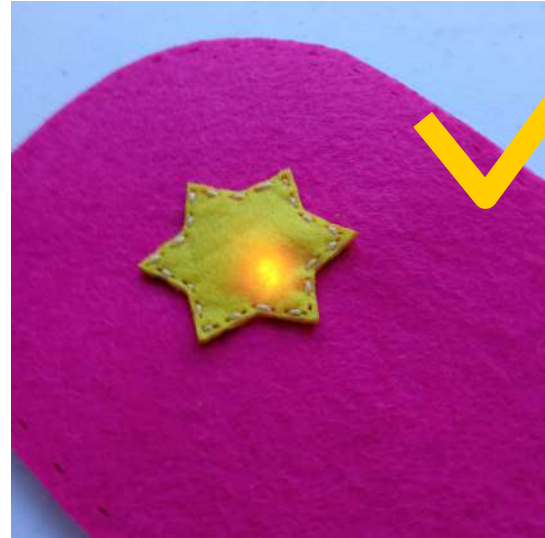
Sew the chosen applications



Connecting the battery



Connect the battery with the plus (+) symbol face up and verify if everything is working





Sew the slippers 1





Sew the slippers 2 – final





Next step

Share your creations :

**We love to see different models,
please , share yours in IG and tag
@shemakes_eu @fabricademy
@vivalab and @you**

shemakes

Thank you

www.shemakes.eu



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