



## Shield Instructions – Fabric Considerations and Step by step instructions

### *Fabric choices and preparation:*

Things to consider when gathering supplies to make shields:

- Choose **appropriate** and **colorful fabrics** - see guidelines at end of this document
- Fabric must be **100% woven cotton** (commonly called quilter's cotton)
- **Wash** the cotton fabric before cutting.
- The **waterproof layer** must be PUL, polyurethane laminate fabric, which is waterproof, breathable and non-toxic. This is the only acceptable material for the waterproof layer.
- The **shield pattern** can be downloaded from the website, [daysforgirls.org](http://daysforgirls.org) under Volunteer/MakeKits. Instructions for creating the full-size pattern are on the pattern sheet.
- The pattern identifies where the pockets are located; these are the **pocket ends**. The other two sides are called the **wings**; this is where the snaps will be put on.
- Use **colorful thread** when edge-stitching. Bright pink enhances almost all colorful prints. Think 'cheerful and feminine'.
- **Mix-up the fabrics** and pockets with print-on-print designs to make the finished item cheerful and disguise future stains.
- In planning, **avoid designing kits with 'all matching pieces'**. Kits are assembled with items received from many sources and it is not possible to ensure each and every kit consists of 'matched components'. To keep things equitable for all girls receiving kits, we avoid giving any girl(s) a 'matched set' when others in her group will be receiving an eclectic mix.
- Sewing tools needed to make a shield: sewing machine with straight stitch, steam iron, large sewing scissor and/or rotary cutter
- Fabric pieces needed to make a shield: two cotton shields, one PUL shield, and two cotton pockets - all cut per pattern specifications

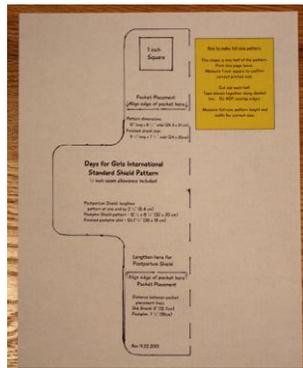
### *How to make the pockets:*

- Option One – cut each pocket individually, 4 ¼ x 5 inch (10.8 x 12.7 cm) piece of cotton fabric. Fold in half to 4 ¼ x 2 ½ inches (10.8 x 6.35 cm). Sew a line of stitching along the fold to add strength to the fold; place the stitches approx. ¼ inch (0.64 cm) from the fold.
- Option Two – the speed method. Cut a strip of fabric 5 inches (12.7 cm) wide by any length. If you cut across a piece of quilter's cotton, the strip will be 5 x 44" (12.7 x 112 cm). Fold it in half lengthwise yielding a doubled piece measuring 2 ½ x 44" (6.35 x 112 cm). Sew a line of stitching along the fold (approx. ¼ inch from fold); this will strengthen the edge of the pocket. Then cut the strip into 4 ¼ inch pieces (10.8 cm). Each piece is one pocket measuring 4 ¼ x 2 ½ inches (10.8 x 6.35 cm). The pocket width of 4 ¼ inches (10.8 cm) is slightly larger than the shield width – this is intentional – the slightly wider pocket ensures it is securely sewn into the seam. Excess width will be trimmed off during shield construction.

**Shields:**



**Shield pattern as printed:**



**After taping two halves together:**



**Cut pieces needed to make a shield:**

- Two cotton shield pieces
- One PUL piece
- Two cotton pockets



Waterproof layer

**PUL**

(Poly Urethane Laminate fabric)

- Washable
- Breathable
- Non-toxic

## Step-by-step instructions to make a shield.

- 1) Start with: two cotton pockets and two cotton shield pieces
  - a) MARK one of the shield pieces with a few long basting stitches. When finished, this will be the bottom side of the shield; however, as you see in these instructions, this piece will be on top as you sew and progress through most of these steps. Watch the pictures. From this point further, this will be referred to as "TheStitchMark". (picture 1a)
  - b) Insert a pocket between the shields (shield pieces right-sides-facing), placing the fold-edge of the pocket towards the shield-center, align the pocket with the sides and flat end of the shield. BASTE along one of the pocket sides, as shown. (Note: the fold edge of the pocket should be stabilized with a line of stitching before inserting.)
  - c) Similarly align the second pocket at the other end. Then baste along the pocket side, as shown. (picture 1b)

*This is called the "shield sandwich"*



Instructions continue on next page

## 2) Trim & Attach the PUL (a basting procedure)

**Begin with:** Shield Sandwich and a pre-cut PUL shield

**Trim PUL:** clip the corners of the PUL at all four 'pocket' corners, as shown

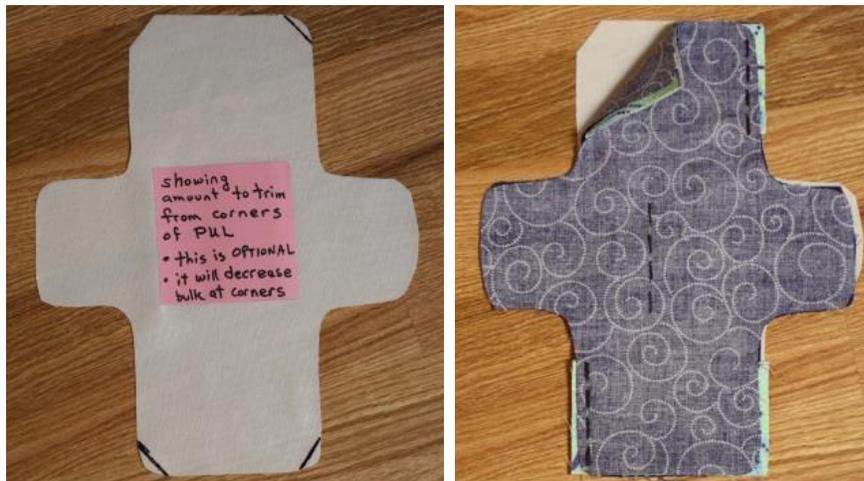
**Layer:** place PUL "Shiny side up", then put the shield sandwich on top of the PUL with the "TheStitchMark" showing on the top side

**Clever tip:** the S & S acronym will help you remember the layering sequence.

S&S = "Shiny up, StitchMark up"

**Important:** the PUL is the waterproof barrier; if inserted incorrectly it is less effective.

**Baste:** baste the PUL in place with basting stitches in the same manner the pockets were basted (that is, just sew overtop the previous basting stitches)

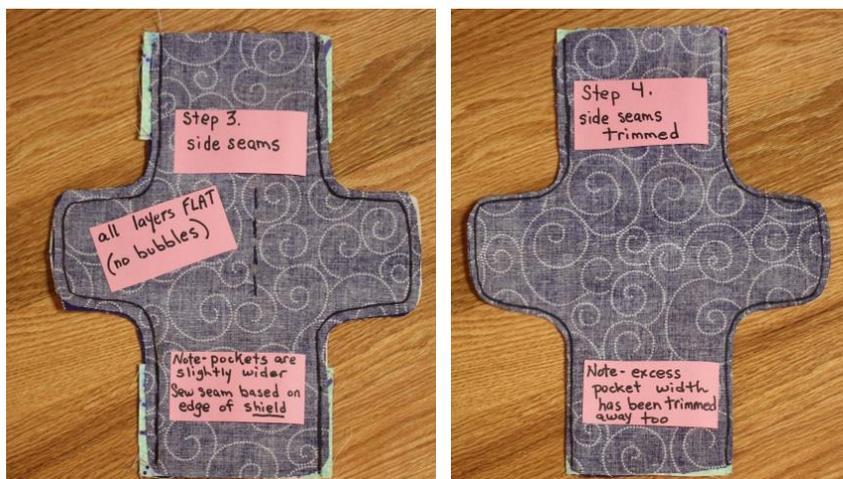


## 3) Sew Seams.

Sew 1/4" seam as shown in picture below. Use stitch length 2.5 or 3.0mm. Sew down the length of each side, leaving both ends open. Keep all layers flat; there should be no bubbling between layers.

## 4) Trim the seam in the entire STITCHED area.

Do not trim in the openings. Trimming is most easily done with a larger sewing scissor or a small rotary cutter.



## 5) Turn and Press.

- TURN right-side-out. Use fingers to gently push out the rounded wings.
- FOLD the pockets to the bottom (the side of the shield with "TheStitchMark"). Using fingers, gently spread the unstitched end as wide open as possible.
- PRESS, to give it a professional look



## 6) Stitch and Trim

- STITCH across each end, keeping the ends as wide open as possible
- TRIM these seams at the corners, as shown.

Tapering decreases the bulk and, when the shield is finished, will minimize the thickness in these areas, giving the final garment a nice professional look.



## 7) Turn, Press and Edge-stitch

- TURN both pockets to the TOP (the side of the shield without the "TheStitchMark"). (picture 7a)
- PRESS; give it a professional look
- Thread the sewing machine with a pretty COLORFUL thread such as bright pink. Pink seems to enhance virtually all color combinations.

EDGE-STITCH all around, stitching 1/8" from the edge, keeping especially close to the edge all along the pocket. (The pocket opening must remain as wide as possible to allow for multiple liners to be inserted simultaneously).

Do an extra back-tack at the "fold edge" of each pocket. (pictures 7b and 7c)



- The shield is now ready for the snap to be attached. Follow the instructions provided with the snapper. Snaps are centered 1/2 inch from finished edge of each wing. More information on the preferred KamSnaps can be found at [DaysforGirls.org](http://DaysforGirls.org) under Volunteer/Make Kits. If you do not have a snapper, Days for Girls will add the snaps.

Send the shields to: Days for Girls, 810 H St Rd, Lynden, WA 98264 US

Shields could also be sent to a DfG Chapter near you; contact them before sending.

## Guidelines for proper selection of fabric:

- Use 100% woven cotton fabric similar to quilters cotton
- Pick **colorful** fabrics, preferably botanicals, geometrics and batiks
- Fabrics should be medium to dark in color to disguise stains
- Some prints are offensive or illegal in some communities. Prints with people, animals and figures cannot be sent to Muslim communities. **NO** camouflage fabrics as these are illegal in many countries. Fabrics with bugs, reptiles, guns, knives, culture-specific themes as well as girly-glam should be avoided. Bugs, reptiles and animals are predators in some areas; fabrics including these are uncomfortable for the girls to wear and use.