



# Knitting

Knitting is one of the most widely used home crafts. Variations in yarns, colors, and needle sizes give many interesting effects.

## I. Materials and Equipment

### a) Yarn

- Match the yarn to the use of the article when it's done. If your article must be washed often (eg. clothes) a synthetic fiber like nylon or acrylic would be best.
  - Yarn fibers: their advantages and disadvantages
    - a) Wool - very absorbent and comfortable
      - generally has to be hand washed with little scrubbing or it will shrink and mat.
    - b) Cotton - absorbent and comfortable
      - can be machine washed
      - drip dry to prevent shrinkage
    - c) Nylon - strong
      - washes and dries by machine
      - will not absorb moisture so it's hot and clammy to wear
    - d) Acrylic - deteriorates in sunlight
      - includes orlon, acrilan, sayelle
      - machine wash and dry
      - fairly absorbent so is comfortable to wear
      - makes fuzz-balls ("pills") from rubbing
    - e) Polyester - machine wash and dry
      - holds its shape well .
  - Always buy all the yarn you need to complete the article at one time because dye lots of colors might vary slightly.
  - Yarn construction:
    - A) Highly twisted - yarns are smooth and durable. They are also easy to work with.
    - B) Loosely twisted - yarns are warm and have a nice texture, They are usually less durable.
    - C) Novelty - yarns are different fibres twisted together to give an exciting texture. They are often less durable than smooth yarns and usually suitable only for simple patterns. Examples are boucle, chenille, metallic or
    - D) Ply—refers to the number of strands of fibre that are twisted together to form the yarn.
- TIP: Looped and nubby yarn are harder to work with. It may be hard to get the tension even. Smooth or slightly fuzzy yarns are easier to work with.



- Comparison of ounces and grams:
  - 28 grams -- approx. 1 oz.
  - 40 grams -- approx. 1 1/2 ozs.
  - 50 grams -- approx. 1 3/4 ozs.
  - 100 grams -- approx. 3 1/2 ozs.

## b) Needles

- The larger the needles, the bigger the holes in the knitting.
- Usually thin needles are used for thin yarns and heavy needles for thick yarns.
- Equivalent Sizes for knitting needles:

A*	00	0	1	2	3	4	5	6	7	8	9	10	10.5	11	12	13	15
B*	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	00	000
C*	2	2.25	2.75	3	3.25	3.75	4	4.5	5	5.5	6	6.5	7	7.5	8	9	10

A\* American                      B\* British or Canadian                      C\* Metric (mm)

## c) Gauge

- Always check the gauge of yarn and knitting needles. This is particularly important if you have substituted a different yarn.
- Gauge is the number of stitches crosswise in one inch and the number of rows lengthwise in one inch,
- Knit a swatch about 3 inches square using yarn and needles you have chosen for the project.
- Block, according to section 5, then measure out a box one inch square in the middle.
- Count the number of stitches and rows. If there are more stitches and rows in one inch than specified, try larger needles. If there are fewer rows and stitches in one square inch, use smaller needles.

## 2. Knitting Terms and Abbreviations

To save space, pattern manufacturers use abbreviations in instructions. Here are the common abbreviations:

* rnd. - round	st. - stitch	sts. - stitches	k. - knit	p. - purl
Inc. - increase	Dec. - decrease	tog. - together	sl. - slip	beg. - beginning
incl. - inclusive	pat. - pattern	lp. - loop	sl. st. - slip stitch	
t.b.l. - through back of loops		Wl. Fwd. - wool forward		
W.O. or Y.O. - wool over		W.O.N. or Y.O.N. - wool over needle		
P.S.S.O. - pass slip stitch over		W.R.N. - wool round needle		

\* Directions just after it are to be repeated the stated number of times. (eg.: repeat from \* 3 times means 4 times in all.)

( ) - Directions inside ( ) should be done the stated number of times. (eg.: (K3P4) 3 times means you K3,P4,K3,P4,K3,P4.

## III. The Basics

### a) Casting On

There are two ways of casting on:

#### I. One-Needle Method:

- Make a slip knot about 2 feet from end of yarn.
- Slip needle into loop. Tighten (diagram 1).
- With the loose end of the yarn make a loop on the left thumb. Insert needle through

underside of this loop. Put the yarn that comes from the ball over the needle from the back and draw it

- Tighten stitch short thread 3). Repeat many times as



through the 2). This knits the needle. by pulling end (diagram from \* as required.

## ii) Two-Needle Method:

- Make a slip knot in left-hand needle.
- \*Insert right hand needle into loop from left to right.
- Pass thread around point of right needle from front to back and draw thread through. This forms another loop on the right needle.
- Insert left needle from right to left into this loop and draw it off the right needle onto the left.
  - Repeat from \* as many times as required.



## b) Holding Yarn

- To keep tension even, yarn is threaded in and out of fingers on right hand as illustrated.
- The index finger of left hand is placed on the first stitch near the tip of the needle to hold thread on.
- When first row is completed, transfer the needle with the stitches to the left hand and the empty needle to the right hand.
- Re-thread fingers of right hand.

## c) Knit Stitch (K); (Plain Knitting or Garter Stitch)

- Cast on required stitches. Hold as in diagram above with needle with stitches in left hand, empty needle in right, and fingers of right hand threaded with yarn coming from the ball.
- \* Insert right needle into the front of the first stitch and push point of right needle behind left needle. Keep yarn to the back of the work. (diagram 1)
- With right hand, bring yarn behind right needle to the left, then back to the right behind left needle. (diagram 2)
- By bringing point of right needle to a position in front of left needle, a loop is formed on right needle. (diagram 3)
- Slide the stitch through which this loop was made off the point of the left needle.
- Repeat from \* till all stitches are on right needle. Transfer needles and hands so right hand holds empty needle.
  - Begin at \* for next row, etc.



## d) Purl Stitch (P)

Purl stitch is done similarly to knit stitch with two main differences:

- In knit, yarn from the threaded hand is held at the back of the work. In purl, the yarn from the ball is held in front of both needles.

- In K., the needle is inserted from front of stitch to the back. In p., the needle is inserted in front of the stitch from left to right, the right needle on top of the left needle. Purl stitch is seldom used alone.

#### e) Increasing

- On a "K" row: Knit first into the front of the stitch as usual. Then knit into the back of this same stitch before removing it from the needle. This makes one stitch into two.
- In a "P" row: Purl into front of stitch as usual, then purl into the back of the same stitch before removing it from needle.

#### f) Decreasing

- On a "K" row: Insert needle into two stitches instead of one. Treat them as a single loop when completing the stitch.
- On a "P" row: Purl two stitches together by inserting needle into both before purling.

#### g) Binding Off

- When work is completed, binding off is necessary to prevent stitches from running back.
- When binding off, always knit the "K" stitches in the previous row and purl the "P" stitches. Be sure to keep tension loose so work does not draw in.
- Slip the first stitch off the left needle onto right needle without working. Knit (or purl) second stitch, leaving 2 stitches on right needle.
- Insert point of left needle through front of first (unworked) stitch on right needle. Pull this stitch over top of the 2nd stitch on right needle and drop over point of both needles. This leaves 1 stitch on right needle.
- Continue till 1 last stitch remains on left needle.
- Cut yarn from ball and draw through this last loop.

#### h) Yarn Over (Y.O.)

- For K - bring yarn under right needle to the front, then over the right needle to the back ready to knit next stitch.
- For P. - bring yarn over right needle to back, then under right needle to the front, ready to purl next stitch.
- Y.O. forms a loop on needle which in the next row is worked as a stitch.



#### i) Slip Stitch (sl.st.)

- Insert right needle through stitch on left needle and slip it onto right needle without working it.

#### j) Pass Slip Stitch Over (P.S.S.O.)

- Slip one stitch, knit (or purl) next stitch, bring the slip stitch over the knit stitch as in binding off.

#### k) Changing Colors

- Pick up color you are about to work with under color you have just finished using. This prevents holes.

## IV. Variations on Basic Stitches

#### a) Garter Stitch

- This is plain knitting (K) repeated back and forth for several rows. Work looks the same on both sides.

#### b) Stockinette Stitch

- One row is knit, the next row purl, the next row knit, etc.

- Front (right) side is smooth and stitches look like V's. Back (wrong) side is smooth and stitches look horizontal.
- When the smooth side is facing you, knit that row. When bumpy side is facing you, purl the row.

### c) Ribbing

- Ribbing is elastic and is used for cuffs, sweater hems, necklines, etc.
- Cast on even number of stitches that is divisible by 4.
- (K2, P2) to end of row.
- Turn work and begin with K2P2.
- Repeat for the required number of rows.

### d) Seed Stitch

- Cast on uneven number of stitches.
- Knit first row 1 plain, 1 purl.
- Second row 1 purl, 1 plain and so on.

### e) Jumbo Stitch (Brioche stitch)

- Cast on a number of stitches divisible by 3.
- 1st row. W1 fwd.; sl 1 as to knit; K2 tog. Repeat to end of row.
- All rows are the same.

### f) Cardigan Stitch

- You cast on twice as many stitches as you would ordinarily use for the required length. Cast on an even number of stitches.
- 1st row. K1; Wk fwd. as to purl, sl 1; return thread to back of needle; repeat to end of row.
- All rows are the same.

### g) Bramble Stitch

- This is a fancy stitch often called the Popcorn stitch.
- Cast on a number of stitches divisible by 4.
- 1st row K1, P1, K1 in first stitch; P3 tog.  
Repeat to end of row.
- 2nd row P all the way across
- 3rd row P3 tog; K1, P1, K1 into next stitch  
Repeat to end of row.
- 4th row P all the way across.  
This completes the pattern once.
- Repeat to required depth.

### h) Pocket

- The width and depth of pocket is determined according to use.
- Knit as for sweater fabric until within one inch of pocket top.
- Knit stitches required for width of pocket in ribbing.
- When 1 inch is knit, cast off pocket stitches on right side.
- On separate needles cast on the number of stitches as were cast off for pocket.
- Knit in plain knitting until fabric is the depth of the pocket.
- Knit this piece on to sweater needle where stitches were cast off.
- Sew lining in place.

### i) Buttonhole

- Determine size of button and estimate number of stitches necessary to make opening.
- Knit to place of opening and cast off stitches required.
- Continue knitting to end of row.

- Return row; cast on same number of stitches as were cast off on previous row at the place of casting off.
- Continue knitting.
- Buttonhole should be worked with Whipping stitch or blanket stitch to strengthen edges.

#### j) Eyelet Hole

- Background is stocking stitch.
- Small holes are formed, suitable in size for threading with a draw string or small yarn.
- Cast on 22 sts.
- Knit 4 rows stocking stitch.
- 5th row: xK2, Wl. fw. K2 tog. xrepeat from x to x to last 2 sts. K2.
- 6th row; K1. Purl to last st. K1.
- Knit 4 rows stocking stitch.
- 11th row; Repeat 5th row.
- 12th row; K1 Purl to last st. K1.
- Knit 4 rows stocking stitch.
- Cast off.

#### k) Ribbon Hole

- Background is stocking stitch. Larger holes are formed suitable for threading with ribbon or heavy yarn.
- Cast on 22.
- Knit 4 rows stocking stitch.
- 5th row: xK2. w.r.n. twice. K2 tog. xRepeat from x to x to last 2 stitches. K2.
- 6th row: K1. Purl to last stitch. K1.
- Knit 4 rows stocking stitch.
- 11th row: Repeat 5th row.
- 12th row: Repeat 6th row.
- Cast off.

#### l) Feather and Fan

- This stitch is lacy and open.
- Cast on a number of stitches divisible by 19, and 2 sts. over.
- 1st row: xK2. K2 tog. (3 times), w.o.n. K1 (5 times), w.o.n., K2 tog. (3 times). Repeat from x to x to last 2 st. K2.
- 2nd row: K1. Purl to last st. K1.
- 3rd row: Knit all the way across.
- 4th row: K1. Purl to last st. K1.
- Repeat these four rows to required length.

#### m) Cable Stitch

- This stitch gives the appearance of a cable.
- Cast on 24 stitches.
- 1st row: K1, P3, K6, P4, K6, P3, K1.
- 2nd row: K4, P6, K4, P6, K4.
- Repeat these two rows twice, making six rows all.
- 7th row: K1, P3. xSl 3 sts. on spare needle, K next 3 sts. K3 sts. on spare needle x. P4.
- 8th row: K4, P6, K4, P6, K4.
- Repeat these 8 rows.
- Repeat the first two rows three times.
- Cast off.

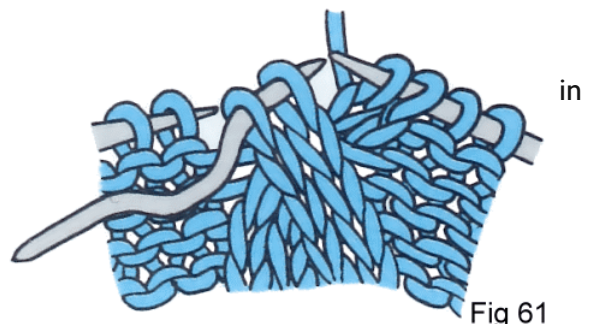


Fig 61

## 5. Finishing Details

### a) Blocking

- On a large sheet of paper draw in pencil the outline of the proper finished size.
- Lay pattern on padded surface.
- Using rustproof pins, pin finished piece onto paper and through padding.
- Stretch or bunch up knitted article so its edges match drawn-out outline.
- Lay damp cloth over top of article, then a dry cloth over that.
- Press lightly with iron set at "wool".
- When knitting feels slightly damp, remove the press cloths but leave knitting pinned down until dry.
- If pressing is done too heavily, yarn will be flattened.



### b) Seams

- Thread a blunt-pointed needle with knitting yarn you used.
- Lay blocked pieces right sides together.
- Begin with three small stitches in the same place (knots pull through).
- Using a widely spaced whipping stitch, join the outside yarns together.
- Turn right side out and pull slightly so seam lies flat. Seams may be machine stitched if yarn is lightweight and seams won't be seen.
- For a sweater though, hand whipping is preferable.

### c) Thread Ends

- (Hopefully!) all thread ends where yarns were joined are on the outer edges.
- After seams are made, thread the yarn ends into needle and darn in and out of the very edge of the whipping stitches.

## 6. Advanced Techniques

- Included have been the basic stitches and a few variations.
- Knitting on four or more needles or circular needles utilizes the same stitches and basic techniques.
- For more information on knitting, check on line or in craft stores for "Learn How To Knit" type books. The internet can also be an excellent source of information and videos.

## 7. Evaluation

- Is the completed article practical and useful, and does it conform to the standards for good design?
- Does the yarn chosen suit the article re: washability, durability, etc.?
- Are stitches even in size?
- Is tension even?
- Are cast-on and cast-off rows just as stretchy and loose as the rest of the article?
- Are joined thread ends all at the seam edges and darned securely into the seam?
- Are seams stitched securely and inconspicuously?
- Does the completed article look neat and clean without being over pressed?



## **Project Resources:**

### **Pinterest – The Visual Discovery Tool**

Pinterest is a social media bulletin board for you to virtually pin pictures of things that interest you to your own personal boards – Pin-Explore-Discover! 4-H Manitoba has a Pinterest account. Each project series has a board full of fun and interesting ideas. There are also boards for 4-H Awesome, Community Service, Volunteers, Communications and Building Blocks. Check it out at [www.pinterest.com/4hmanitoba/](http://www.pinterest.com/4hmanitoba/).

For more information on learning to knit or knitting, here are some websites to get you started.

<http://www.canadianliving.com/crafts/knitting/>

<http://www.yarnspirations.com/> Free patterns and ideas

<http://www.redheart.com/learn>

[http://www.redheart.com/files/patterns/pdf/J27-0001\\_KnittingMadeEasy\\_2.pdf](http://www.redheart.com/files/patterns/pdf/J27-0001_KnittingMadeEasy_2.pdf)

- link to a free to download instruction book for knitting and crocheting including patterns.

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