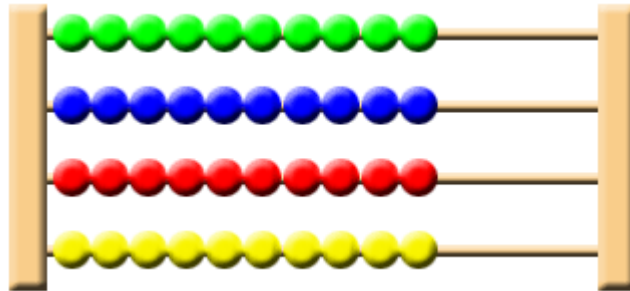


Counting Frame

Beads to count with

Directions:

1. Cut two 8" pieces of 2x2.
2. Cut four 1/4" dowels each piece 10" long. Measure carefully so they are the same length.
3. Sand all pieces smooth.
4. Mark on each 2x2 at the 1, 3, 5 and 7 inches.
5. Drill 1/4" holes at each of the 8 marks on the two 2x2s. Drill about 1/2" deep.



6. Put two drops of glue in the four holes on one 2x2. Wipe off ALL extra glue.
7. Insert the dowels and tap them in with the other 2x2.
8. Put the beads on the dowels. IN THIS ORDER:
10 green, 10 blue, 10 red, 10 green
9. Put two drops of glue in the other holes.
10. Insert the four dowels in the other 2x2. Tap them with another piece of wood. Measure the distance between the 2x2s to see if it is about 9 inches. Then the dowels are in the slots securely.
11. Let the glue set at least an hour.
12. Sign and date your work.

PACT time activities for all ages (Parent and Child Together Time)

Babies: can use the counting frame as a rattle watching the beads move back and forth with mom's help. The sound is inviting too.

Toddlers: like to move the beads back and forth with their fingers. You can also introduce the quantity of 1 bead, 2 beads and lots of beads.

3, 4 and 5 year olds: like to make some games with the counting frame.

Game 1: Play a visual matching game. Move 1, 2 or 3 beads over to the other side of the frame. Ask your child to do the same as you on the beads under your dowel.

Game 2: Count the beads as you slide them over to the other side. Do it slowly and say the number as the bead reaches the other side. Then the group of 3 or 7 beads is together.

Game 3: Pattern Match. Make a design with one line of beads (like 5 groups of two). Then the child makes the same design on the next line.

Game 4: Knowing Quantity. Move 1, 2, 3 or 4 beads across the dowel. Ask your child to tell you how many beads you moved without counting.

More games that you make up:

6, 7 and 8 year olds: Play the Knowing Quantity Game with 1 to 7 beads in a group.

Play addition games by adding beads:

1. Make combinations of ten $1+9$, $2+8$, $3+7$, etc.
2. Add groups like 3 and 4 beads to make a group of 7.
3. Use with the units, tens, hundreds and thousands cards to compose numbers and to add large quantities.

1000
green numerals

100
red

10
blue

1
green

Play all the above games with subtraction as the target.

Counting Frame Materials List

- 2x2 2 8"
- 1/4" dowel 4 10"
- Beads: 7mm inside diameter, 5/8" or 16mm outside diameter 10 each of red and blue, 20 of green for math purposes
- You could also do multi-colored beads if you had no need for math extensions (I have a preference; it's probably obvious.)
- wood glue
- sandpaper
- saw
- drill and 1/4" bit
- c clamps
- 1x2 board for steadying dowel against for sawing
- marker to sign

Sawing dowels is difficult. Clamp down a 1x2 to the table. Steady and hold dowel against it with the mark near the end of the board. Start with some strokes by the saw toward your body to make a notch. Saw with less pressure especially as you get near the end.

Drill holes for the dowels as straight up and down as possible. Have parents check one another's drill position. Drill hole 1/2" deep. Insert the dowels and tap to make sure they go in all the way. Don't use too much glue and wipe off the excess.

Some parents put big signatures on their work. Over time they should realize It Is distracting to the children and sign small. But don't kill enthusiasm and ownership too early.