

Continued from previous page

REPEAT 15 [PLOT DIE]

draws bars of various lengths, depending upon what DIE randomly reports. Try this:

SETUP 12

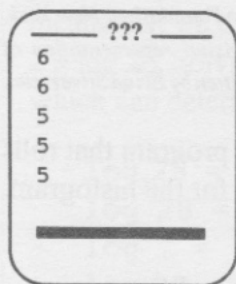
REPEAT 1000 [PLOT DIE + DIE]

The procedure HISTO graphs a list of data.

HISTO [2 3 2 3 2 3 2 3 2 3 3 3]

produces a bar 5 steps long at the 2 position and 7 steps long at the 3 position.

In the LogoWriter version of this program you may type data directly on the screen, one item per line.



The procedure SCREEN reads this data and reports it as a list. So, you may use SCREEN as the input to HISTO:

HISTO SCREEN

will do the same thing, in this case, as

HISTO [6 6 5 5 5]

You may want to alter the SETUP procedure to better suit your needs.

If you are using Terrapin Logo or Object Logo you can determine the size of your graphics window, allowing, for example, a much larger histogram. You can change the values of the variables LEFT, BOTTOM, and TOP accordingly.

The value of XSTEP is set at 1. If you make it greater, the bars will be longer. This may be useful if you have a small amount of data. (Making XSTEP less than 1 may have weird results.)

If you want your histograms to be drawn vertically, change XSTEP to YSTEP and vice versa. Do this in PLOT and GROW as well as in SETUP.

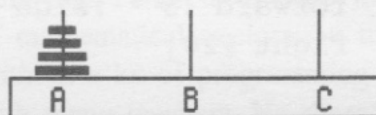
Knights Revisited Here is a great activity you can do with your students. Have them role play King Arthur and the knights! See lesson plan on page 5.

Splotches This program was inspired by "Graphing Equations & Green Globbs" created by David Kibbey and Sharon Dugdale and distributed by Sunburst.

The object of this game is to get a high score by removing all the "splotches" from the coordinate axes by shooting a projectile. The direction of the projectile is determined by values for its slope and y-intercept. The score is based on efficiency of play. The more splotches you hit with one projectile and the fewest rounds of play are better rewarded.

Tower Puzzle (as in Tower of Hanoi) The source for this application is Brian Harvey's Computer Science Logo Style Volume 1, pages 110-114. It was also discussed in the Clime News - Volume 4 No. 1 (12/91)

The object of the tower puzzle is to move the tower on peg A to either tower B or C in the least number of moves following these rules: (1) You can move only one disk at a time and (2) you can never place a larger disk on top of a smaller disk. Collect some data and put into a table:



Number of disks <u>in tower</u>	Minimum No. <u>moves</u>
1	1
2	3
3	7
4	???

Try it for other size towers. Can you predict how many moves it would take to move a 7 tower? a 8 tower? etc. Can you come up with a formula?

Triangle Experiments

A glass rod of a given length is to be dropped and we are only interested in considering the events when it

See Microworlds III... page 15