



# Farmer's Math

## A Lesson with Kindergarten Students

by Ann Carlyle

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Ann Carlyle, a Math Solutions Inservice consultant, has been an elementary teacher in Goleta, California, for more than 30 years. She is the 1993 Presidential Award winner for Excellence in Mathematics Teaching and the 2000 recipient of the George Polya Memorial Award from the California Mathematics Council. : Ufa YñgA Uh grew out of her work in her kindergarten classroom.

; UFXyb|b| 'dfcj |XYgnci b| 'W|'XFYb'k |h 'f|W'a Uh Ya U|W'cdcfh b|h|Yg"B chcb`mXc'gi !  
XYblg'Yb| U| Y|b'Wi bh|b| ža YUg f|b| žUbX'W`WM|b| 'XUUK \Yb| UFXyb|b| žVi h|h YmUgc \Uj Y  
Uk cbXYfZ `h'a Y"

H Y| UFXyb|b| 'dfc'YM|b'a m\_|bXYf| Ufhb'WUg'fcca 'V| Ub'k |h 'Ugla d'Yg'YX"K YdUgg'YX'  
Uci bX'UZj UVYubžk \JW'lg'gla |'Uf'hc 'U'ja UVYubžUbX'ja U| ]bYX'k \Uh\_|bX'cZd'Ubh|hik ci 'X'  
VYwa Y'H\YW|'XFYb'fYwfXYX'h Yf'h|b\_|b| ]b'h Yf'ci fbUg'H\Yb'UW|'XÎ g|UfHXi' h Yg'YX'  
Vmk fUdd|b| ]h|b'UdUdYf'hc Yž\_Yyd|b| ]h'a c|gh|b'Ud'Ug|WVdžUbX'd'UW|b| ]h|b'Ug|bbmi  
gdch|b'h YWUg'fcca "

CbW'h Yg'YX'gd'fci hXžk \JW'hc' U'ci h'h fYX'Uhgžk YfUbgd'UbhX'h|h|b'gca Ygc]' UbX'  
V| Ub'hc'k UH' ]h|f'ck 'UbX'Ūci f|g' "fZUWUg'fcca 'XcYg|ñi \Uj YUW'gg'hc'gca Ygc]'ci h|g'Xž  
h Yg'YX|b| 'Wb'VYdi h|b'Ud'Ub|h|b| 'Wd'E'

K Y'hc' bch'cZh Yg'YX|b| 'fY| i 'U'ñ'UbX'h YW|'XFYb'fYwfXYX'h|g'dfc| fYgg|b'h Yf'ci fbUg'  
K YUf'gha YUg fYX'h Y\Y| \hcZh Yg'YX|b| 'k |h I b|Ū| α 'WVYg'UbX'fYwfXYX'h Ydfc| fYgg'cZ  
h Yg'dfci h'K YgUj YX'Ub'cf| ]bU' i bg'dfci hX'gYXžk \JW'k Ug'U'ci hcbY|bW|b'Yb| h žUbX'  
Wa dUFYX'h|hc' h'Y'Yb| h'cZh YbYk 'g'YX|b| "@UH'k YXi [ i d'h Yg'YX|b| žk Ug' YX'cZh Y'  
fcclgž'hc' U'hcU'a YUg fYa YbhcZh Yf'cclgž'h Yg'YXžUbX'h Y'Yb| h'cZh Yg'cc|žUbX'Wa !  
dUFYX'h|hc' h'Yi bg'dfci hX'gYX"K YfYd'UbhX'h Yg'YX|b| 'UbXžcbW'h YmUddYfYXžWi bhX'  
h'Y'Yj Yg'9j Yb| U'mk YW'i bhX'h YV'cgga g'cb'h Yd'Ubh'UbX'h Ybi a Vf'cZVUbg|b'UdcX'"

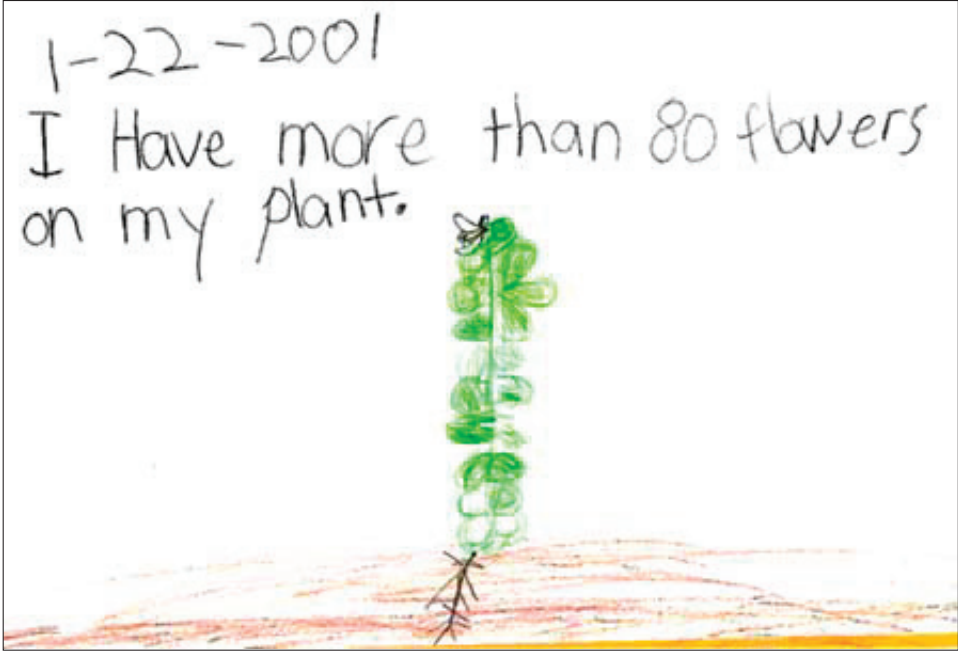


Figure 1. We counted the blossoms on the plant and the number of beans in a pod.

5 gk Yk UWYXh YgYX]b[ ' [ fck žk YfYUX'W] XfYbŃ Vcc\_gk ]h U[ UFXyb]b[ 'h Ya Ylc'g d!  
 dcfh h Ygi XYbhŃ bXYfgUbx]b[ 'UbX'bhfYgi"=b'9j Y6i bh]b[ Ńg Sunflower House fCUb'8 ]Y[ c.'  
 < UfWi fh6fUW/ '7cž%- \*Ižh YWUFUMf'gUFY]bgd]fYX'c'd'UbhgYXg]b UfYMLb[ i 'U'UffUb[ Y!  
 a Yblž\cd]b[ 'hUh h Ynk ]'' [ fck ]bhc U[ UFXyb'gfi Wf fY'9j Ybli U`mh YWUFUMf'gUFYUVYlc'  
 [ c ]bg]XY'h ]g\ci gžUgdWU'd'UW'h UhWa YUVci h h fci [ \ 'h YWfYZ 'hMbX]b[ 'cZh YgYX!  
 ']b[ gVmh YW] XfYb"

AbYhGhY YbgŃ Vcc\_ 'Tops and Bottoms' fCUb'8 ]Y[ c.< UfWi fh6fUW/ '7cž%-) Iž]bgd]fYX'h Y  
 WU]cb'cZUUF[ fUd\ 'cZh Ygi XYbhŃ Uj cf]h'j Y[ YhUV'g'

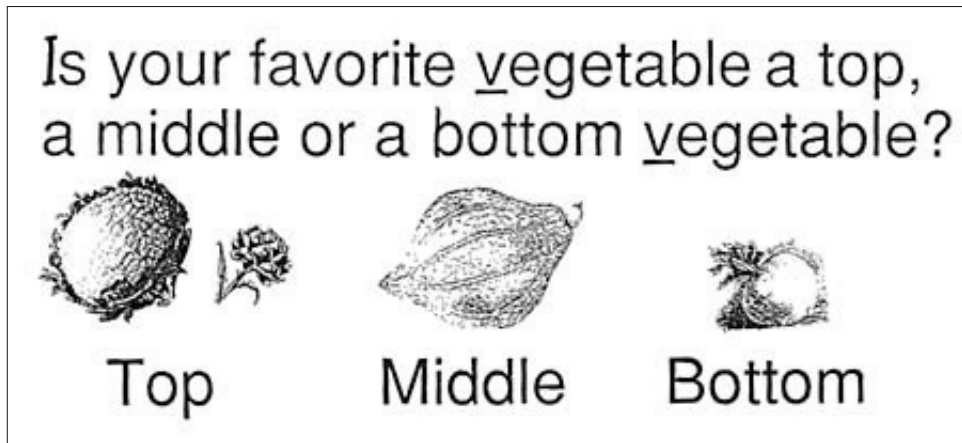


Figure 2. We graphed the students' favorite vegetables.

; fU\|b| h Yf'dfYZfYbWgk Ug'Ub'cddcfh| b|hm|c W`YMXUUVci hI Vchca I j Y| YUVYgfgj W Ug'WffchgzdcfUcYgzUbX'cb|cbgzI a |XX'Yi j Y| YUVYgfgj W Ug`Yhi WZVfcWw'zUbX'WYfniz UbXI hcdI j Y| YUVYgfgj W Ug'WfbL"

5ZM'ci f'Yi dYf|YbWk |h h'YZJ UVYubzk Yd'UbhX'g| bUck Yf'gYXgUbX'a YUg| fYX'h YgY XfUa UjWd'Ublg'Ugh Ym| fyk "5ZM'Uk \ |Yzk YZci bX'h YI b|U| = WVYghc VYhcc'ga U`Zcf` a YUg| f|b| zgc k Y|bgHUKi gYXDcdg|WYgh|Wg'K YWhUgf|d'cZUX|b|`a UW|bYHdYh YgUa Y \Y| \hcZh Ygi bUck Yfzd'UMX'hcb'U\cf|ncbH'g| fZUMzUbX'd'UMXDcdg|WYgh|Wg'YbX|h'!YbX' Ucb|`h YdUdYf'hUdY"5`gczk Yd|WYX'U'Uf| Ygi bUck Yf`YUZubX'a YUg| fYX'\ck`a UbmWVYg'Uhi Ufci bX'h YdYf|a YMF"H'Yb k YWi bhX'\ck`a UbmWVYg'U`YX'h YUFYUcZh Y`YUZci h|bY"

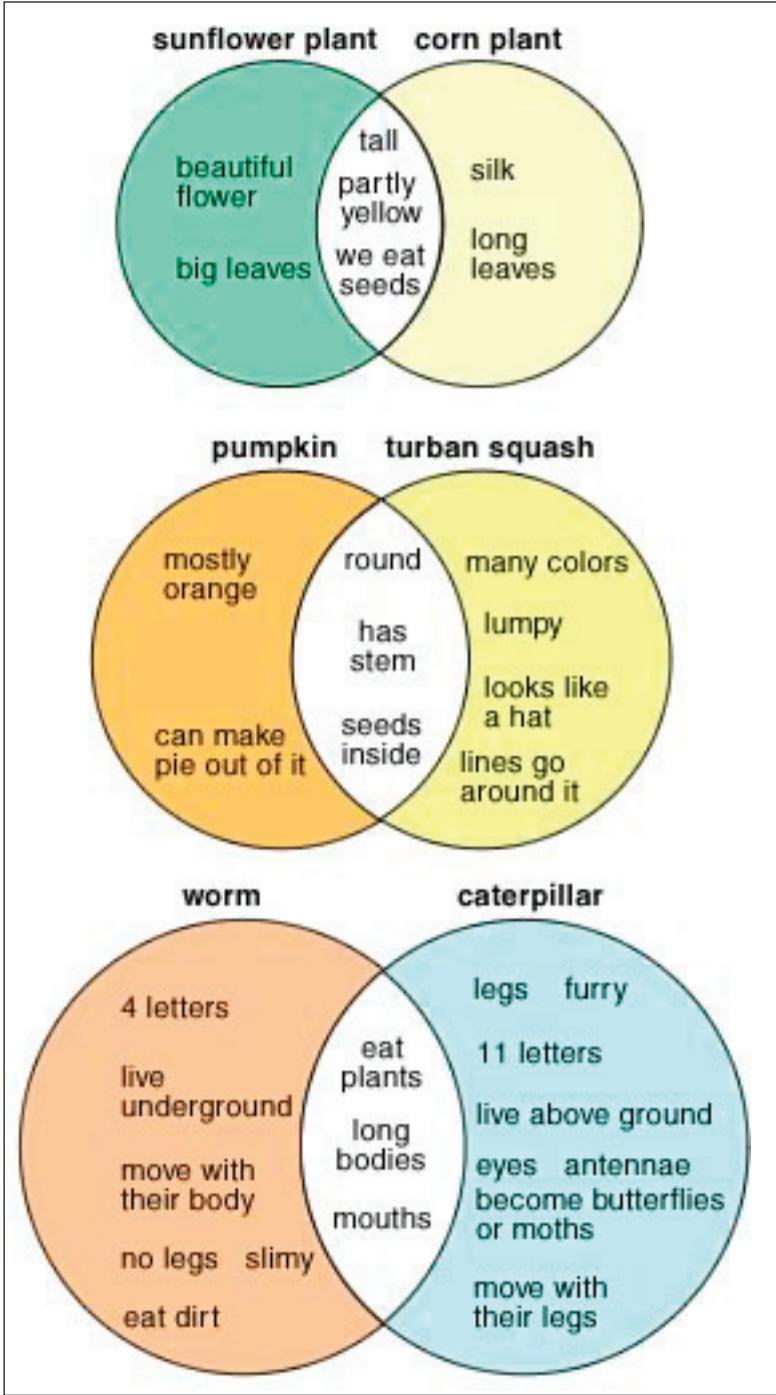


Figure 3. We compared plants and garden likenesses and differences.

I gbl Uglā d`YgdccbZ `Zca UW`Wjcb`cZgYYXgfUWa a YWU`dUWYhcZ%!VMb`gci d`  
k cf\_gk Y``\YFžk Ya UXYUVF`[ fUd`cZh`Yj U]ci g\_]bXgcZVMbg"K YWa dUFYX`cbYgdccb`  
glā d`Yhc`Ubch`Yf`glā d`Yhc`gY`\ck`X|ZZfYbhc f`gla ]`U`h`Ymk`YF`

K YWa dUFYX`d`Ublg`UbX[ UFXyb`Ub]a UgZcf``\_ YbYgg`Yg`UbXX|ZZfYbWg`UbXfYwfXX`ci f`  
h`b\_]b[ `cb`UWUgg`JYbb`X]U`fUa`"

K Y`\_`Yhc`h`b\_]cZci f`WUgg`cca`Ug`UZfa`žk`\YFyk`Y[ fck`d`Ublg`UbX`]XUg`"Ci f`W`XfYb`UFY`  
[ fck`]b[`Ug`k`Y`ž`UbX`ci f`[ UFXyb]b[ `Yl`dYf]YbW`\Ydglhc`bi`fhi`fYh`Yf[ fck`h`"