Deciphering Nature's Code: The Secret Mathematics of the Natural World Mike Naylor abacaba@gmail.com Nasjonalt senter for matematikk i opplæringen Notes on this talk and other resources at <u>http://mike-naylor.com</u>

<u>Rabbit Farm</u>

<u>Bee Tree</u>

Month Pairs of Babies Pairs of Adults

January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	





• 138 • 125 • 112^{• 133} •117 •104 •91 •91 •99•120•141 •96 •83 •70 •78 • 130 • 143 • 109 • 75 • 62 • 49 • 57 • 65 • 86 • 107 • 128 • 122 • 88 • 36 • 44 •52 •73 •94 $\cdot 135 \cdot 101$ $\cdot 67$ $\cdot 54 \cdot 41 \cdot 28$ $\cdot 23 \cdot 31$ 115 127 • 144 • 140 • 85 • 119 • 98 • 77 • 56 • 35 • 27 • 19 • 24 • 37 • 50 • 84 • 118 132 $\cdot 111 \cdot 90 \cdot 69 \cdot 48 \cdot 40 \cdot 32 \cdot 45 \cdot 58 \cdot 71 \cdot 105 \cdot 139$

Puzzle: STAIR SKIPPING

You can step up one or two steps at a time. How many different ways can you walk up 10 steps?



<u>Links</u>

Notes and other resources: http://mike-naylor.com

Try out Nathan Shields' spiral generator and other great things on his site: http://www.10minutemath.com/

Puzzle: GARDEN EDGING

I have twenty large stones, the faces of which are rectangles two feet long and one foot wide. I want to build a 20-foot long wall, two feet high, by standing the stones up vertically, laying pairs of stones horizontally on top of each other, or any combination of these. For example, here are two ways I could build a 6-foot wide wall:



How many different ways are there to build a 20-foot wide wall?