

Digital Images

Pictures can be generated as they are needed by following algorithms, producing a different picture every time.

Doodle Algorithms

ONE SOLUTION

By following the algorithm (the instructions), draw a leafy branch.

To Draw a Leafy Branch:

1. Draw a wavy green line with three leaves at the end as shown.
2. DoodleDraw from that line as follows.

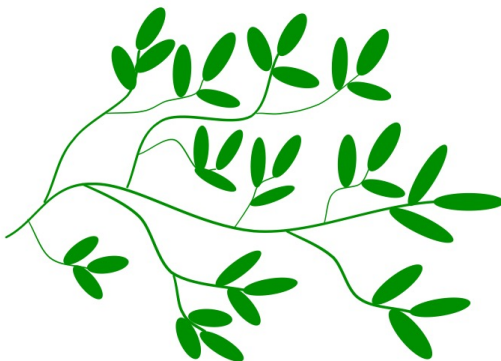
To DoodleDraw from a chosen line:

1. Draw a new wavy line from it with 3 leaves at the end.
2. Choose a new existing line and DoodleDraw from that line

Create your own variations of this Doodle Algorithm. Add more leaves, berries or buds to the instructions, for example.

Tick the circle when you have attempted the puzzle and so practised the skill.

Skill:
Algorithmic
Thinking



Light bulb image, all pages by OpenClipart-Vectors from Pixabay

Well done if you have solved all the puzzles! You have great thinking skills and are well on the way to building the skills to be a great Computer Scientist! If not, keep practising. You will get better.

Solutions: Find the answers and copies of puzzle sheets to photocopy for class use at cs4fn.blog/puzzles/ All puzzles **Attribution NonCommercial ShareAlike** "CC BY-NC-SA". This puzzle book was created by Paul Curzon and Jo Brodie. Puzzle checking by Daniel. Thanks to EPSRC for support on grant EP/W033615/1. Design by Kelly Burrows (kellyburrows@gmail.com). 18,000 copies of this free booklet have been sent to over 460 UK school / home educator subscribers.