

Beebot and Beyond

How can we use the Beebot to deliver aspects of KS1 Computing?

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The Programming Elements of the KS1 Computing Curriculum

Pupils should be taught to:

- * understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- * create and debug simple programs
- * use logical reasoning to predict the behaviour of simple programs



Why the Beebot?

- A simple programming language
- Only 7 commands
- Young children love it!
- Concrete physical toy
- Robust
- Many schools already have them



What about Progression? They use Beebot in Reception!



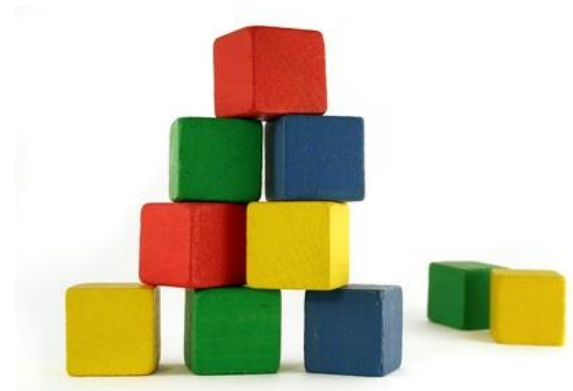
Progression is not about what you use, it is what you do with it!

So what would your Progression look like?

As in other aspects of learning:

* Exploration → Purposeful use of ICT

* Concrete → Abstract

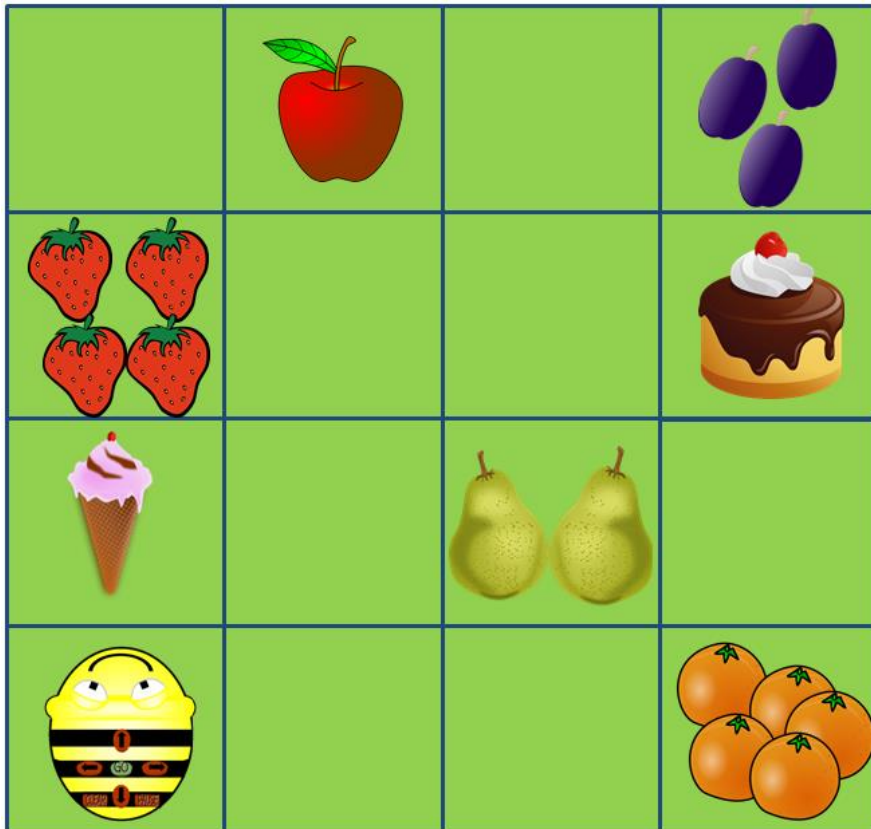


So what would your Progression look like?

- Exploratory play
- Trial and Error
- Increased Purpose
- Short sequences of instructions
- Planning out steps in advance – developing algorithms – Inputting a longer sequence of steps or program, executing it and debugging.

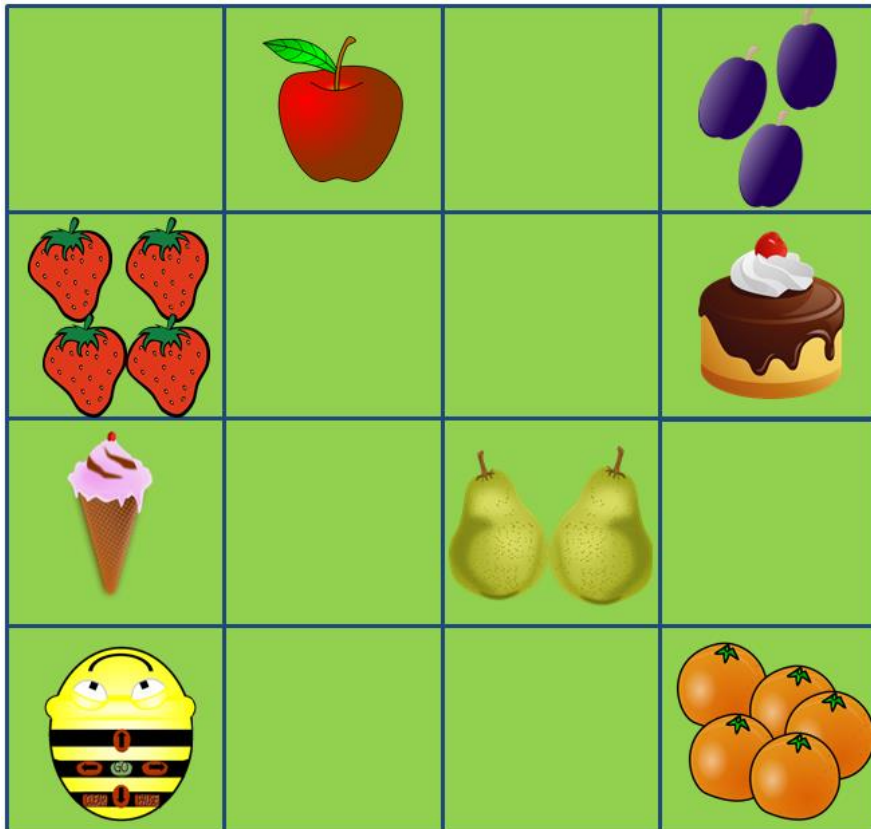


More Complicated Problems!



- Consider the difference!
 - Get Beebot to the apple
 - Get Beebot to travel to all the fruit the Hungry Caterpillar ate in order. Program him to pause on each fruit. Avoid the junk food and don't travel over fruit twice!
- A Beebot can be programmed with up to 40 instructions

My Algorithm



By my calculation the second example takes 33 instructions – Can you do it in less?

right, forward, left, forward, forward, forward, pause, back, back, right, forward, pause, left, forward, forward, right, forward, pause, back, right, forward, right, forward, forward, pause, back, left, forward, forward, left, forward, forward, pause

What resources Will I need Then?

- Some people like Beebot rulers – 15cm
- TTS make lots of mats and equipment



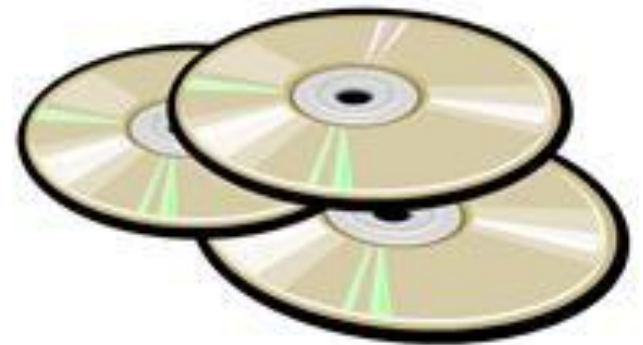
However I Like to Be More Creative

- Beebot travels in steps of 15cm - 16 squares in a 60cmx60cm grid (make different size / shape grids if you prefer but squares always 15cmx15cm)
- Be creative, make your maps, design your tasks, work out your algorithm, program, test, debug.



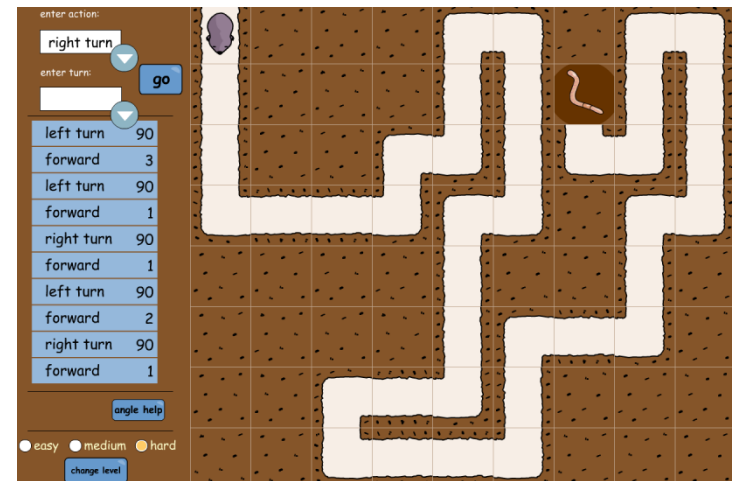
Children Move From the Concrete to the More Abstract

- Lots of different software and online resources available
- Will look at a sample few that some schools use
- This is not a recommendation

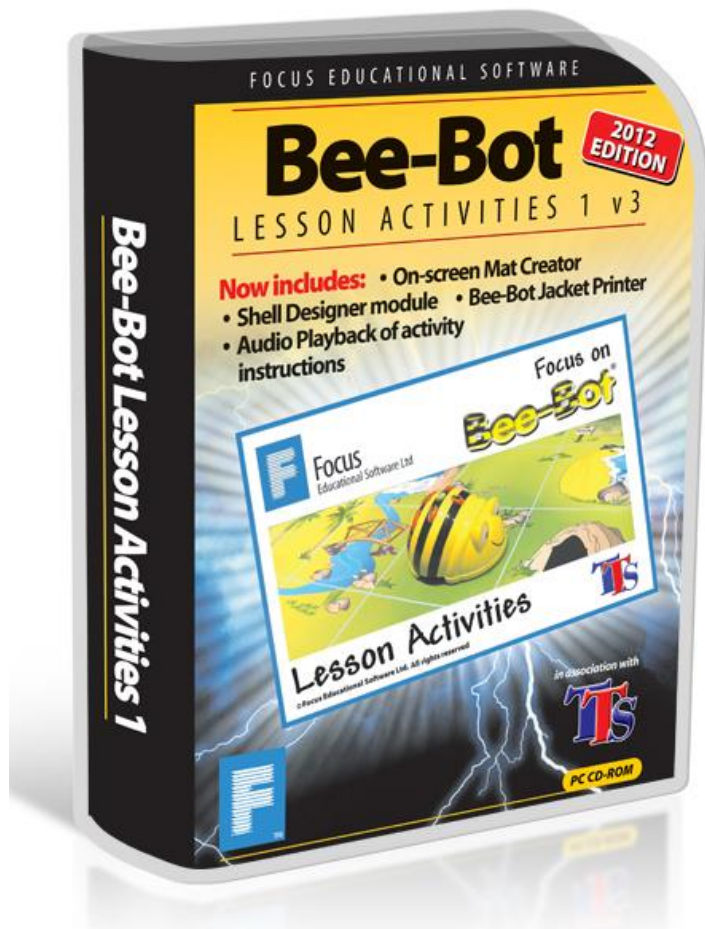


Computer and Tablet Based Applications

- Software such as - Terry the Turtle, 2Go, Focus on Beebot – A great stepping stone towards more complex Logo programming
- There are Apps too eg. [Free Beebot app](#), Paid for Beebot Pyramid app, [Daisy the Dino App](#)
- Lots of free online activities e.g. [Mole maze](#) on Tes iBoard – Great for home learning too!



On-Screen – Example Software - Focus on Beebot



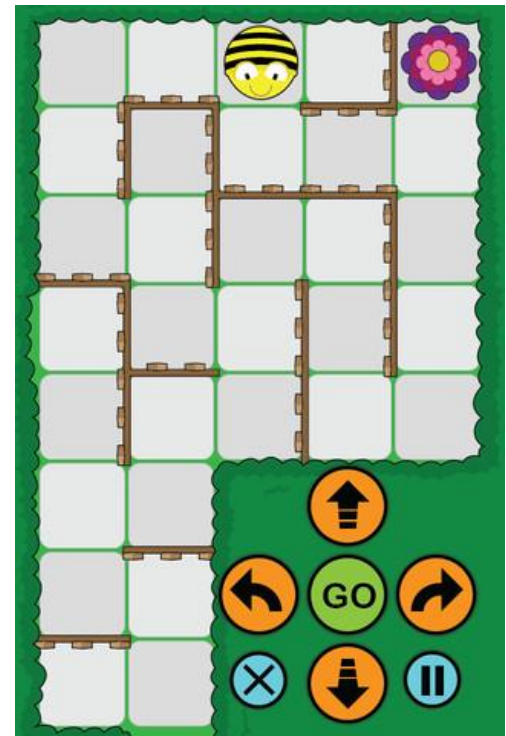
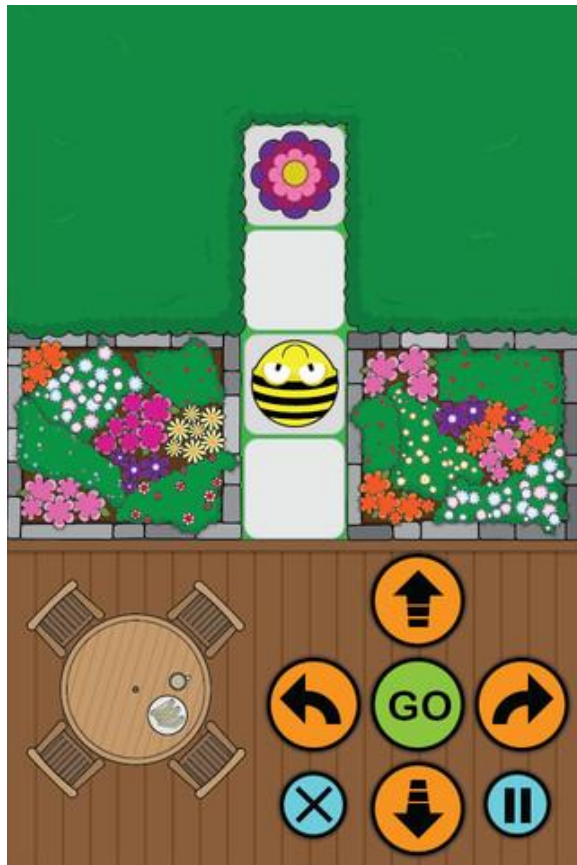
- Transfers skills from practical to on-screen
- Cross curricular activities
- Mat Creator allows you to build your own activities linked to current themes
- Develop algorithms, create programs, debug

On-Screen – Example Software - 2Go

- Remember teachers options in all 2 Simple software ctrl+shift+o (the letter o)
- Turning controls, 90 degree allow programming – builds on Beebot learning
- Make sure import, save and undo buttons are visible
- To ensure you can browse and find backgrounds outside of my documents make sure use standard dialogue boxes is selected (click the square with 3 dots on the background tab)



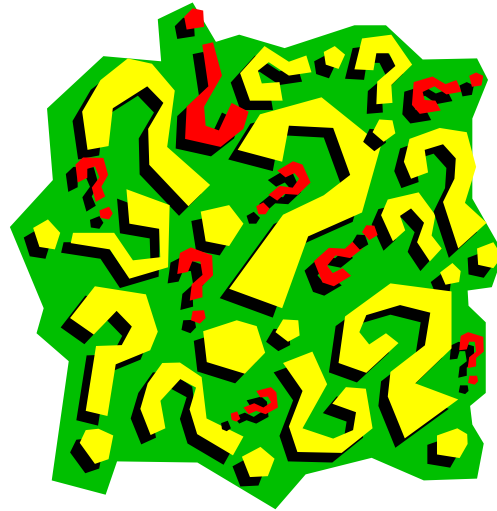
iPad - Beebot App



Remember You can Apply this Across the Curriculum

Video
removed

Any Questions?



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