

Scheme of Work

Programming using Scratch is designed to teach S1 and S2 pupil's fundamental programming constructs in an engaging manner. The course can be extended or reduced depending on the timescales available. This is a **suggested** scheme of work that is flexible and can adapt to meet the needs of your pupils. The booklets assume no prior knowledge and progress in complexity gradually. They are designed with the need for interspersed teacher tuition and should not be issued unsupported.

Complete Resources

Scratch Workbook (37 Pages)
Scratch Extension – Maze Adventure (15 Pages)
Scratch Extension – Puff Collector (20 Pages)
Scratch Extension – Block Breaker (19 Pages)
Scratch Paper Exercises Workbook
Game Assessment Checklist
Game Evaluation
Printable Module Posters
Scratch Cards (MIT Resource)
Scratch Blocks for SmartBoard
Scratch Collaborative Desk Exercise
Scratch Cut-outs for Desk Exercise
Scratch Extension Problem Solving Exercise
Scratch Tracking Spreadsheet
Group Exercise Scenario PowerPoint
ACfE PowerPoint
Introduction to Scratch PowerPoint
Completed Scratch Game Files (.sb)

Timescale

The resources provided are designed to cater from the first lesson to resources that extend and engage high ability pupils, rather than solely occupy them.

Lesson 1 - Introduction to Scratch using existing games as a 'grab' to engage pupils

Allow pupils to familiarise themselves with the Scratch interface. It is also a good idea to allow the pupils the freedom to use sounds and drawing facility at this point to 'get it out of their system'

Lesson 2-4 - Using the Scratch Workbook and Scratch Paper

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Exercises (for lower ability pupils) work through the tasks. Workbook is self-paced and increases in complexity.
Teacher demonstration of key concepts as a whole class exercise would be beneficial at appropriate points

- Lesson 5 - Introduction to Maze Adventure, demonstrate the working game to class in Presentation Mode, without showing the code
Class discussion on how the game might work, code needed, Sprites needed
Work through Maze Adventure booklet
- Lesson 6-7 - Using Game Assessment Checklists – design own game based upon learning outcomes from Maze Adventure
Ensure completion of Evaluation to indicate success#
- *** Some pupils may lack imagination to design a new game and it is important these pupils do not waste time 'trying to think of a game'. With this in mind it might be useful to have some pre-prepared ideas to give to these pupils ***
- # Pupils may wish to upload games to Scratch Community – be sure to attach initials and ensure upload capability from in/out school #
- Lesson 8 - Introduction to Puff Collector, demonstrate the working game to class in Presentation Mode, without showing the code
Class discussion on how the game might work, code needed, Sprites needed
Work through Puff Collector booklet
- Lesson 9-10 - Using Game Assessment Checklists – design own game based upon learning outcomes from Puff Collector
Ensure completion of Evaluation to indicate success
- *** Some pupils may lack imagination to design a new game and it is important these pupils do not waste time 'trying to think of a game'. With this in mind it might be useful to have some pre-prepared ideas to give to these pupils ***
- # Pupils may wish to upload games to Scratch Community – be sure to attach initials and ensure upload capability from in/out school #

- Lesson 11 - ** By this point pupils should be confident in creating modules of code for scenarios **
- Collaborative Desk Exercise using Scratch Cut-outs (preferably laminated with use of dry wipe markers and cloths)
 Arrange pupils into groups of 4 (max)
 Show game 'Bananas and Melons' without displaying the code
 Use Group Exercise Scenario PowerPoint, display each scenario (5 in total) to the class allowing appropriate time for the groups to construct modules which fulfil the requirements of each scenario.
 The idea is to get the pupils working together to solve a problem using the scratch cut-out blocks. It would be valuable to explore incorrect modules constructed by pupils, even creating these in the game to spot what goes wrong – this is intended to generate lots of classroom discussion through whole class debugging
- Lesson 12 Introduction to Block Breaker, demonstrate the working game to class in Presentation Mode, without showing the code
 Class discussion on how the game might work, code needed, Sprites needed
 Work through Block Breaker booklet
- Lesson 13-14 - Using Game Assessment Checklists – design own game based upon learning outcomes from Puff Collector
 Ensure completion of Evaluation to indicate success
- *** Some pupils may lack imagination to design a new game and it is important these pupils do not waste time 'trying to think of a game'. With this in mind it might be useful to have some pre-prepared ideas to give to these pupils ***
- # Pupils may wish to upload games to Scratch Community – be sure to attach initials and ensure upload capability from in/out school #
- Lesson 15 - Problem Solving Exercises for pupils – Scratch games have been designed with faults in place – pupils work through Scratch Extension Problem Solving Exercise Sheets
 Possible solutions for Teachers included
 This is another opportunity for pupils to work

collaboratively (pairs)

Lesson 16

- Pupils should be allowed access to Scratch School Community to play and evaluate each other's games