



Scratch Music Score

Computer Science Concepts

- Sequence
- Repeat loops
- Converting algorithm to code

Maths Concepts

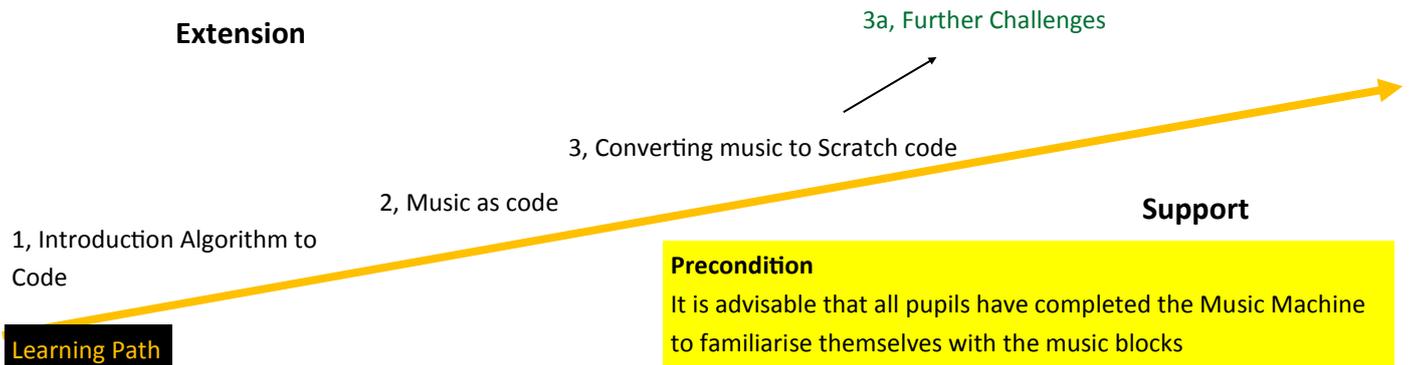
- Decimal Fractions

Program Aim Can pupils turn a music score (algorithm) into code?

Computer Science

People create algorithms and then convert them into programs/code
 Algorithms are precise instructions or rules to accomplish something

Differentiation and Assessment for Learning At the beginning of each session the *learning intention sheet* is shared and the learning journey expanded through success criteria. Pupils feed their progress back to the teacher through annotating this sheet with smiley faces at the end of each lesson. Teachers can also annotate the sheet to indicate those who need more or less help in future lessons. These extra resources can be found on the code-it.co.uk website.



1, Introduction Algorithm to Code

Remind pupils that all programs begin life as algorithms. The algorithm may be an informal one in the programmers head a flowchart or a list of written instructions.

Our task is to program Twinkle Twinkle little star using note blocks so that it will play the whole tune.

We could create our own algorithm but fortunately someone helpful has provided a ready made algorithm for us to use. Ask them what that might be?

2, Music as code

Explain how musical notes are an algorithm to help people play exactly the same tune.

Open the score help sheet and explain how each half a line up on the staff is the next white note along the piano to the right.

Go over the difference between a quarter and a half note. Can they see how they might change the length of note in Scratch (beats) to make half and quarter notes?



Junior

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Scratch Music Score P2

3, Converting music to Scratch code

Challenge pupils to use the information to program Twinkle Twinkle in the least number of note blocks. You may also wish to remind them about repeat x type loop blocks.

SEN Pupils

I give everyone the base help score sheet but if anyone is struggling I give them the easier score help sheet.

3a, Further Challenges

- Add a beat alongside your tune
- Can you find a way to play the song through three times?
- Can you program another piece of music? There are some free downloadable sheet music including happy Birthday and Jingle Bells at <http://www.letsplaykidsmusic.com/tag/free-sheet-music/>
- Can you create a musical card to cheer someone up or celebrate their birthday?

Resources

Scorehelp.pdf

Scorehelpeasy.pdf